

CONTRACT: ID: U-3338B

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

**STATE OF NORTH CAROLINA**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**GEOTECHNICAL ENGINEERING UNIT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	34932.1.1 (U-3338B)	1	37
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34932.1.1	STP-1175(8)	P.E. RAW & UTIL.	

**CONTENTS**

LINE	STATION	PLAN	PROFILE
-L-	10+00 TO 91+20	4-10	14-16
-SRI-	10+00 TO 18+90	9-10	17
-Y-	11+00 TO 11+92	4	18
-YA-	10+00 TO 10+90	4	19
-YI-	12+80 TO 33+00	4,11	20
-Y2-	10+00 TO 12+57	5	21
-Y3-	14+86 TO 15+88	5	22
-Y4-	10+00 TO 11+01	6	23
-Y5-	11+36 TO 16+75	6	24
-Y5B-	10+00 TO 14+58	12	25
-Y6-	5+90 TO 34+70	7,12,13	26-27
-Y7-	10+11 TO 14+04	8	28
-Y7A-	10+00 TO 25+13	8,13	29
-Y8-	10+69 TO 17+02	8	30
-Y9-	10+00 TO 11+70	9	31
-Y10-	11+48 TO 14+00	9	32
-Y11-	12+60 TO 13+82	9	33
-Y12-	10+00 TO 11+37	9	34
-Y15-	12+01 TO 14+90	12	35
-Y16-	14+69 TO 17+85	13	36
-Y17-	10+00 TO 13+59	8	37

**ROADWAY**  
**SUBSURFACE INVESTIGATION**

PROJ. REFERENCE NO. 34932.1.1 (U-3338B) F.A. PROJ. STP-1175(8)  
 COUNTY NEW HANOVER  
 PROJECT DESCRIPTION WILMINGTON - SR 1175 (KERR AVE.) FROM RANDALL PARKWAY TO SR 2649 (MARTIN LUTHER KING, JR. PARKWAY)

**INVENTORY**

**APPENDIX 1**  
CPT LOGS

**SHEET**  
1-55

**CAUTION NOTICE**

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

PERSONNEL

S.C. DILLARD

J.P. DELOATCH

R.E. SMITH

J.M. EDMONDSON

MIDATLANTIC PERSONNEL

CATLIN PERSONNEL

INVESTIGATED BY J.L. STONE

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE SEPTEMBER 2012

DRAWN BY: C.R. SUMNER, C.P. TURNER, J.L. STONE

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.



**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**GEOTECHNICAL ENGINEERING UNIT**

PROJECT REFERENCE NO. U-3338B	SHEET NO. 2
----------------------------------	----------------

**SUBSURFACE INVESTIGATION**

**SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS**

SOIL DESCRIPTION		GRADATION		ROCK DESCRIPTION		TERMS AND DEFINITIONS	
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE: <i>VERY STIFF, GRAY, SILTY CLAY, MOST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i>		WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED) GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.		HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:		ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS, MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (IN OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.	
<b>SOIL LEGEND AND AASHTO CLASSIFICATION</b>		<b>MINERALOGICAL COMPOSITION</b>		<b>WEATHERING</b>			
GENERAL CLASS. GRANULAR MATERIALS (<= 35% PASSING #200) SILT-CLAY MATERIALS (> 35% PASSING #200) ORGANIC MATERIALS		MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.		WEATHERED ROCK (WR) NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.			
GROUP CLASS. A-1, A-2, A-3, A-4, A-5, A-6, A-7		<b>COMPRESSIBILITY</b>		CRYSTALLINE ROCK (CR) FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.			
SYMBOL		SLIGHTLY COMPRESSIBLE LIQUID LIMIT LESS THAN 31 MODERATELY COMPRESSIBLE LIQUID LIMIT EQUAL TO 31-50 HIGHLY COMPRESSIBLE LIQUID LIMIT GREATER THAN 50		NON-CRYSTALLINE ROCK (NCR) FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.			
% PASSING #10, #40, #200		<b>PERCENTAGE OF MATERIAL</b>		COASTAL PLAIN SEDIMENTARY ROCK (CP) COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.			
LIQUID LIMIT PLASTIC INDEX		ORGANIC MATERIAL GRANULAR SOILS SILT - CLAY SOILS OTHER MATERIAL					
GROUP INDEX		TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% 5 - 12% 5 - 10% >10%		FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING, ROCK RINGS UNDER HAMMER IF CRYSTALLINE.			
USUAL TYPES OF MAJOR MATERIALS		MODERATELY ORGANIC 5 - 10% 12 - 20% >20%		VERY SLIGHT (V SL.) ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.			
GEN. RATING AS A SUBGRADE		<b>GROUND WATER</b>		SLIGHT (SL.) ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.			
PI OF A-7-5 SUBGROUP IS <= LL - 30; PI OF A-7-6 SUBGROUP IS > LL - 30		WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING STATIC WATER LEVEL AFTER 24 HOURS PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA SPRING OR SEEP		MODERATE (MOD.) SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.			
<b>CONSISTENCY OR DENSITY</b>		<b>MISCELLANEOUS SYMBOLS</b>		MODERATELY SEVERE (MOD. SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES 'CLUNK' SOUND WHEN STRUCK. IF TESTED, WOULD YIELD SPT REFUSAL.			
PRIMARY SOIL TYPE COMPACTNESS OR CONSISTENCY RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE) RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT <sup>2</sup> )		ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY DIP & DIP DIRECTION OF ROCK STRUCTURES		TEST BORING AUGER BORING CORE BORING MONITORING WELL PIEZOMETER INSTALLATION SLOPE INDICATOR INSTALLATION CONE PENETROMETER TEST SOUNDING ROD		SEVERE (SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED, ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, YIELDS SPT N VALUES > 100 BPF.	
GENERALY GRANULAR MATERIAL (NON-COHESIVE) VERY LOOSE, LOOSE, MEDIUM DENSE, DENSE, VERY DENSE		SPT TEST BORING TEST BORING W/ CORE SPT N-VALUE SPT REFUSAL		VERY SEVERE (V SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE ORIGINAL ROCK FABRIC REMAIN. IF TESTED, YIELDS SPT N VALUES < 100 BPF.		COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.	
GENERALY SILT-CLAY MATERIAL (COHESIVE) VERY SOFT, MEDIUM STIFF, STIFF, VERY STIFF, HARD		<b>ABBREVIATIONS</b>		<b>ROCK HARDNESS</b>		VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.	
TEXTURE OR GRAIN SIZE		AR - AUGER REFUSAL BT - BORING TERMINATED CL - CLAY CPT - CONE PENETRATION TEST CSE - COARSE DMT - DILATOMETER TEST DPT - DYNAMIC PENETRATION TEST e - VOID RATIO F - FINE FOSS - FOSSILIFEROUS FRAC. - FRACTURED, FRACTURES FRAGS. - FRAGMENTS HL - HIGHLY		MED. - MEDIUM MICA - MICACEOUS MOD. - MODERATELY NP - NON PLASTIC ORG. - ORGANIC PMT - PRESSUREMETER TEST SAP. - SAPROLITIC SD. - SAND, SANDY SL. - SILT, SILTY SLI. - SLIGHTLY TCR - TRICONE REFUSAL w - MOISTURE CONTENT V - VERY		HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.	
U.S. STD. SIEVE SIZE OPENING (MM) 4, 10, 40, 60, 200, 270		VST - VANE SHEAR TEST WEA. - WEATHERED W - UNIT WEIGHT W <sub>d</sub> - DRY UNIT WEIGHT SAMPLE ABBREVIATIONS S - BULK SS - SPLIT SPOON ST - SHELBY TUBE RS - ROCK RT - RECOMPACTED TRIAXIAL CBR - CALIFORNIA BEARING RATIO		MODERATELY HARD CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.		MEDIUM HARD CAN BE GROVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.	
BOULDER (BLDR.), COBBLE (COB.), GRAVEL (GR.), COARSE SAND (CSE. SD.), FINE SAND (F SD.), SILT (SL.), CLAY (CL.)		<b>EQUIPMENT USED ON SUBJECT PROJECT</b>		SOFT CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.		VERY SOFT CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGER NAIL.	
GRAIN SIZE MM, IN.		DRILL UNITS: MOBILE B-, BK-51, CME-45C, CME-55B, PORTABLE MOIST, DIEDRICH D-50		ADVANCING TOOLS: CLAY BITS, 6" CONTINUOUS FLIGHT AUGER, 8" HOLLOW AUGERS, HARD FACED FINGER BITS, TUNG-CARBIDE INSERTS, CASING w/ ADVANCER, TRICONE 2 15/16" STEEL TEETH, TRICONE TUNG-CARB., CORE BIT		<b>FRACATURE SPACING</b>	
<b>SOIL MOISTURE - CORRELATION OF TERMS</b>		HAMMER TYPE: AUTOMATIC, MANUAL		CORE SIZE: B, N, H		TERM SPACING THICKNESS	
SOIL MOISTURE SCALE (ATTERBERG LIMITS) FIELD MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTION		HAND TOOLS: POST HOLE DIGGER, HAND AUGER, SOUNDING ROD, VANE SHEAR TEST		VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET MODERATELY CLOSE 1 TO 3 FEET CLOSE 0.16 TO 1 FEET VERY CLOSE LESS THAN 0.16 FEET		VERY THICKLY BEDDED > 4 FEET THICKLY BEDDED 1.5 - 4 FEET THINLY BEDDED 0.16 - 1.5 FEET VERY THINLY BEDDED 0.03 - 0.16 FEET THICKLY LAMINATED 0.008 - 0.03 FEET THINLY LAMINATED < 0.008 FEET	
LL - LIQUID LIMIT PL - PLASTIC LIMIT OM - OPTIMUM MOISTURE SHRINKAGE LIMIT		X DIEDRICH D-50		<b>INDURATION</b>		BENCH MARK: ELEVATION: FT.	
PLASTICITY INDEX (PI) DRY STRENGTH				FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.		NOTES:	
NONPLASTIC 0-5 VERY LOW LOW PLASTICITY 6-15 SLIGHT MED. PLASTICITY 16-25 MEDIUM HIGH PLASTICITY 26 OR MORE HIGH				FRIABLE RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE. MODERATELY INDURATED GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER. INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER. EXTREMELY INDURATED SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.			
<b>COLOR</b>							
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.							

09/08/99

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3338B	2A	37
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34932.1.1	STP-1175(B)	P.E.	

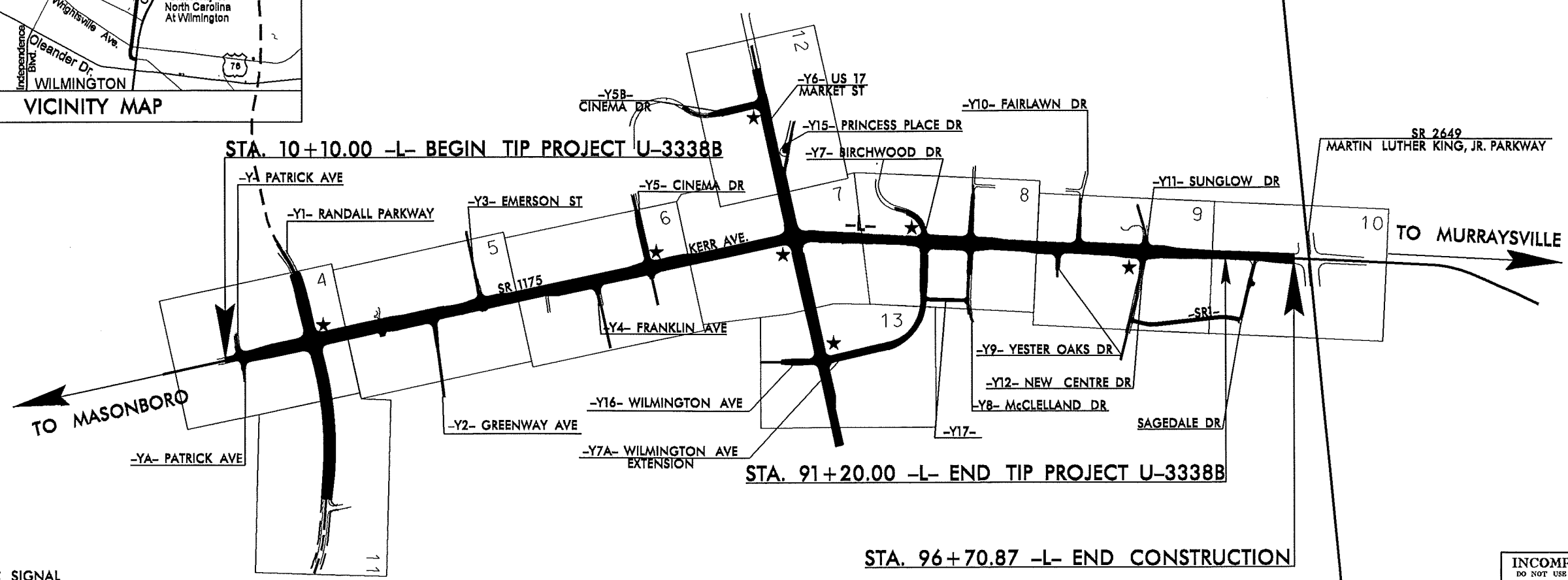
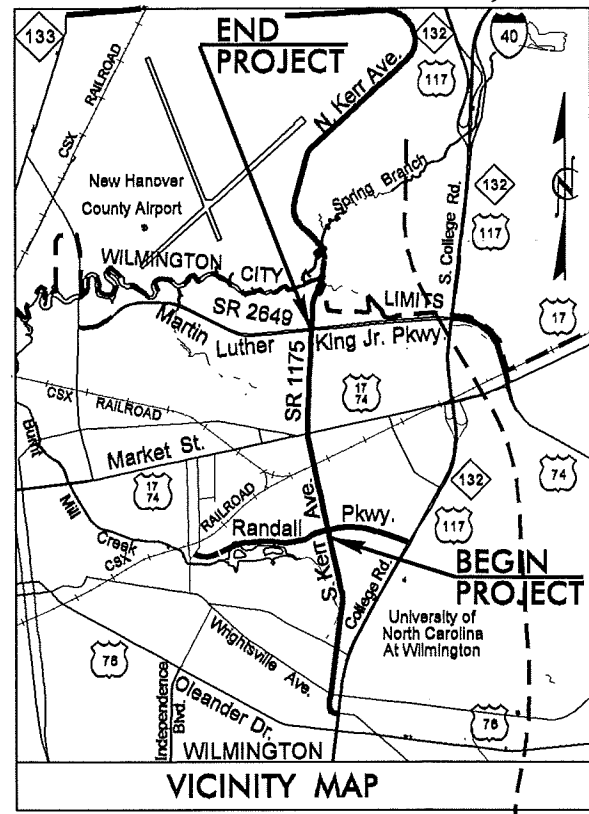
**NEW HANOVER COUNTY**

LOCATION: WILMINGTON - SR 1175 (KERR AVE) FROM  
RANDALL PARKWAY TO SR 2649 (MARTIN  
LUTHER KING, JR. PARKWAY)

TYPE OF WORK: GRADING, PAVING, RESURFACING, CURB &  
GUTTER, DRAINAGE, AND SIGNALS



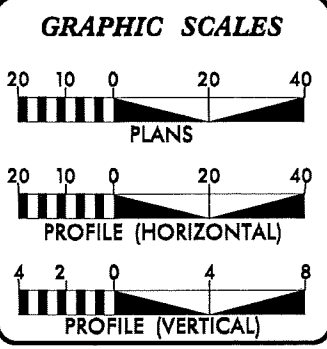
**TIP PROJECT: U-3338B**



★ TRAFFIC SIGNAL  
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF WILMINGTON.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ??.

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**CONTRACT:**



**DESIGN DATA**

ADT 2014	= 30,489
ADT 2034	= 30,786
DHV	= 9 %
D	= 55 %
T	= 5 % *
V	= 50 MPH
FUNC. CLASS = ARTERIAL	
* (TTST 1% + DUAL 4%)	
REGIONAL TIER	

**PROJECT LENGTH**

LENGTH OF ROADWAY TIP PROJECT U-3338B	= 1.54	MI
TOTAL LENGTH OF TIP PROJECT U-3338B	= 1.54	MI

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MARCH 02, 2012

LETTING DATE:  
MARCH 18, 2014

BRENDA MOORE, PE  
PROJECT ENGINEER

KATRINA N. WASHINGTON, PE  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

I:\SEP-2012\_09:33 I:\3-10\Green\Title Investigation\TIP\U3338B\_GEO\_RDW\CADD\_GEO\TECH\Site&Sub\U3338B\_GEO\_RDY\_title.dgn



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

September 13, 2012

STATE PROJECT: 34932.1.1 (U-3338B)  
F.A. PROJECT: STP-1175(8)  
COUNTY: New Hanover  
DESCRIPTION: Wilmington-SR 1175 (Kerr Ave.) from Randall Parkway  
To SR 2649 (MLK Parkway)  
SUBJECT: Geotechnical Inventory

Project Description

This project begins approximately 100 feet south of the intersection of Kerr Ave. and Patrick Ave. in the city of Wilmington and extends northward approximately 1.6 miles ending at the intersection of Kerr Ave. and Martin Luther King Parkway. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork was conducted in May of 2009 and July of 2011. Standard Penetration Test borings were advanced with a Diedrich D-50 drill machine with a manual hammer. Cone Penetration Test borings were completed with a 10 ton digital subtraction cone mounted on an ATV. Hand auger borings were also completed. Representative soil samples were collected for visual classification in the field and for laboratory analysis by the Materials and Tests Unit.

The following alignments were investigated. Subsurface profiles and selected cross sections of these alignments are included in this report.

<u>Line</u>	<u>Station(±)</u>
-L-	10+00 to 91+20
-SR1-	10+00 to 18+90
-Y-	11+00 to 11+92
-YA-	10+00 to 10+90
-Y1-	12+80 to 33+00
-Y2-	10+00 to 12+57
-Y3-	14+86 to 15+88

<u>Line</u>	<u>Station(±)</u>
-Y4-	10+00 to 11+01
-Y5-	11+36 to 16+75
-Y5B-	10+00 to 14+58
-Y6-	5+90 to 34+70
-Y7-	10+11 to 14+04
-Y7A-	10+00 to 25+13
-Y8-	10+69 to 17+02
-Y9-	10+00 to 11+70
-Y10-	11+48 to 14+00
-Y11-	12+60 to 13+82
-Y12-	10+00 to 11+37
-Y15-	12+01 to 14+90
-Y16-	14+69 to 17+85
-Y17-	10+00 to 13+59

Areas of Special Geotechnical Interest

1) The following sections were found to exhibit seasonal high ground water.

<u>Line</u>	<u>Station(±)</u>
-L-	11+40 to 15+50
-L-	17+50 to 18+50
-L-	21+50 to 24+50
-L-	25+50 to 27+00
-L-	33+00 to 37+00
-L-	51+00 to 54+50
-L-	73+50 to 75+50
-L-	78+00 to 79+00
-SR1-	12+50 to 14+00
-SR1-	16+00 to 17+50
-Y2-	10+50 to 12+57
-Y6-	27+00 to 29+00
-Y7-	10+11 to 13+50
-Y8-	14+00 to 17+00

Physiography and Geology

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Natural ground elevations ranged from 21± to 41± feet above sea level

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL ENGINEERING UNIT  
1589 MAIL SERVICE CENTER  
RALEIGH NC 27699-1589

TELEPHONE: 919-707-6850  
FAX: 919-250-4237

WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:  
CENTURY CENTER COMPLEX  
ENTRANCE B-2  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC



Surficial soils in this area are generally classified as undivided coastal plain sediments.

**Ground Water**

Ground water data was collected in May of 2009 and July of 2011, during a time of normal precipitation. Ground water elevations ranged from 22± to 33± feet above sea level.

**Soils**

Soils encountered within this project area have been divided into two categories, undivided coastal plain soils and artificial fill soils.

Soils classified as undivided coastal plain are comprised of 6± to 20± feet of very loose to dense sand (A-2-4, A-3) and 2± to 6± feet of soft to stiff sandy silt (A-4).

Soils classified as artificial fill are composed of 3± feet of dense gravel (A-1-b.)

Respectfully Submitted,



Joseph L. Stone, L.G.

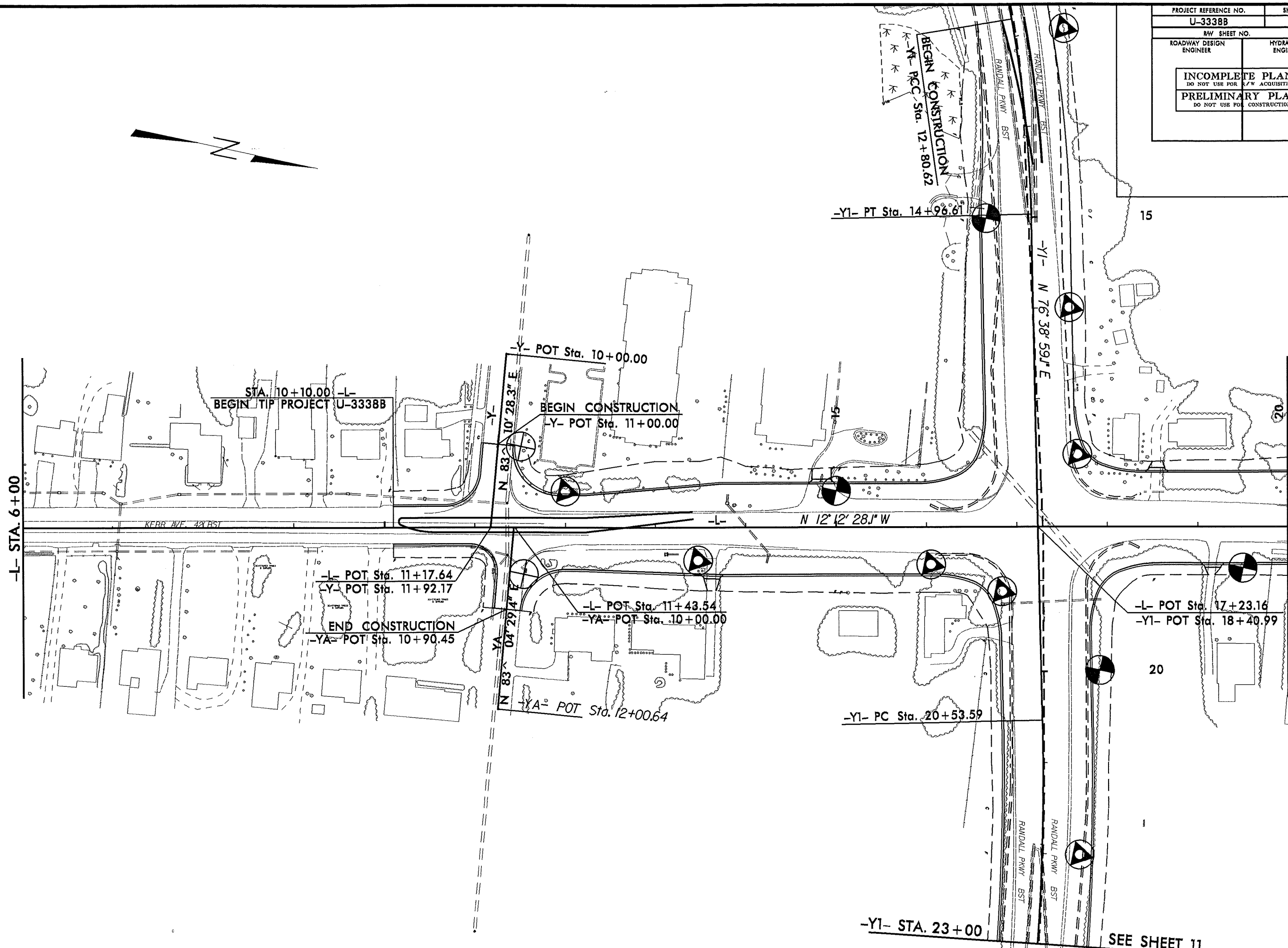
Project Engineering Geologist

8/17/99

3-SEP-2012 08:16 L:\Vero\Green\11\Investigation\TIP\U3338B\_GEO\RDY\CADD\_GEO\TECH\Site&Sub\U-3338B\_GEO\_RDY\_PLAN\_4.dgn

REVISIONS

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR E/W ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



-L- STA. 6+00

STA. 10+10.00 -L-  
BEGIN TIP PROJECT U-3338B

-Y- POT Sta. 10+00.00

BEGIN CONSTRUCTION  
-Y- POT Sta. 11+00.00

-L- POT Sta. 11+17.64  
-Y- POT Sta. 11+92.17

END CONSTRUCTION  
-YA- POT Sta. 10+90.45

-L- POT Sta. 11+43.54  
-YA- POT Sta. 10+00.00

-YA- POT Sta. 12+00.64

-Y1- PC Sta. 20+53.59

-L- POT Sta. 17+23.16  
-Y1- POT Sta. 18+40.99

-Y1- STA. 23+00

SEE SHEET 11

-L- STA. 20+00 SEE SHEET 5

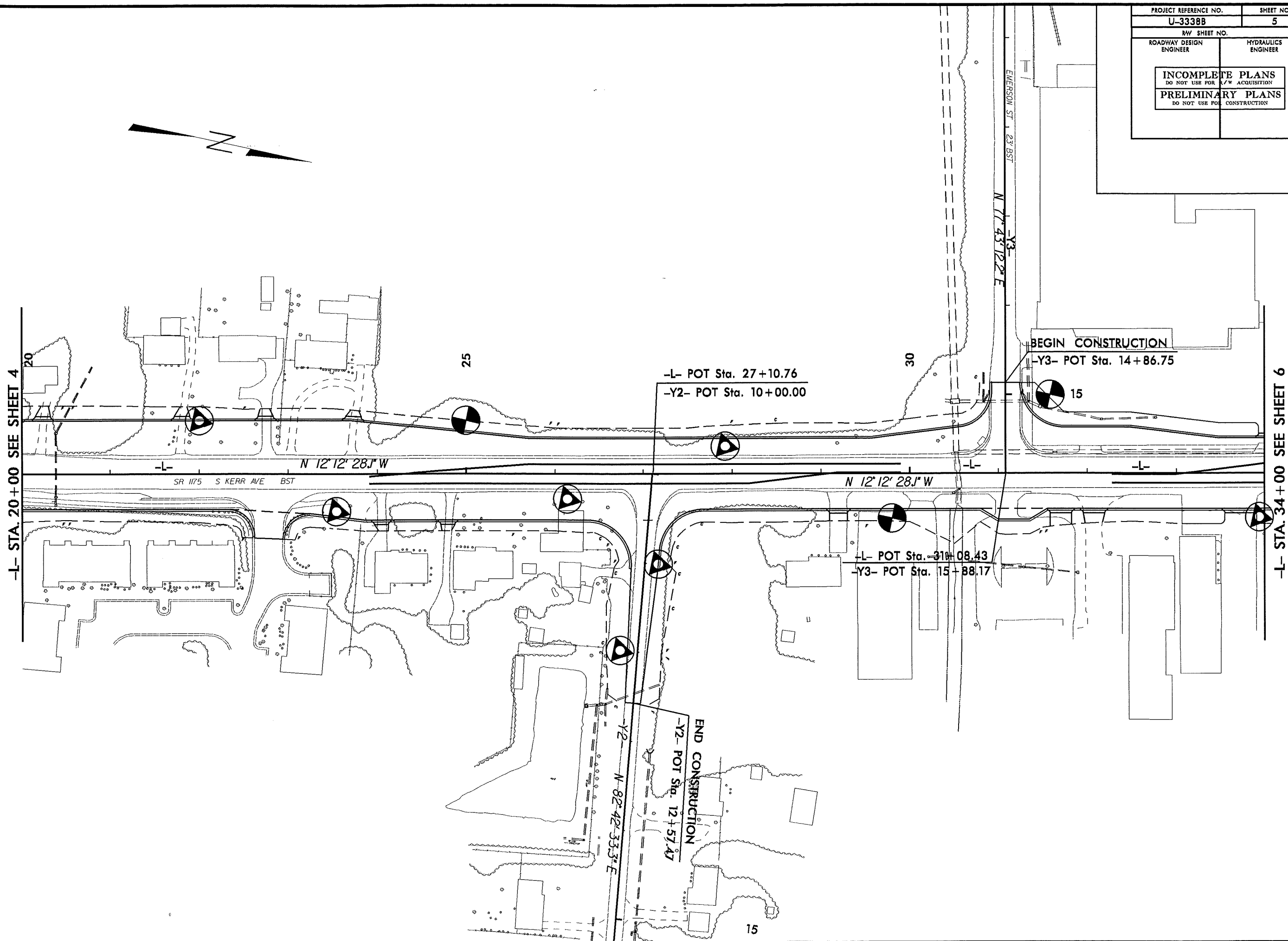
15

20

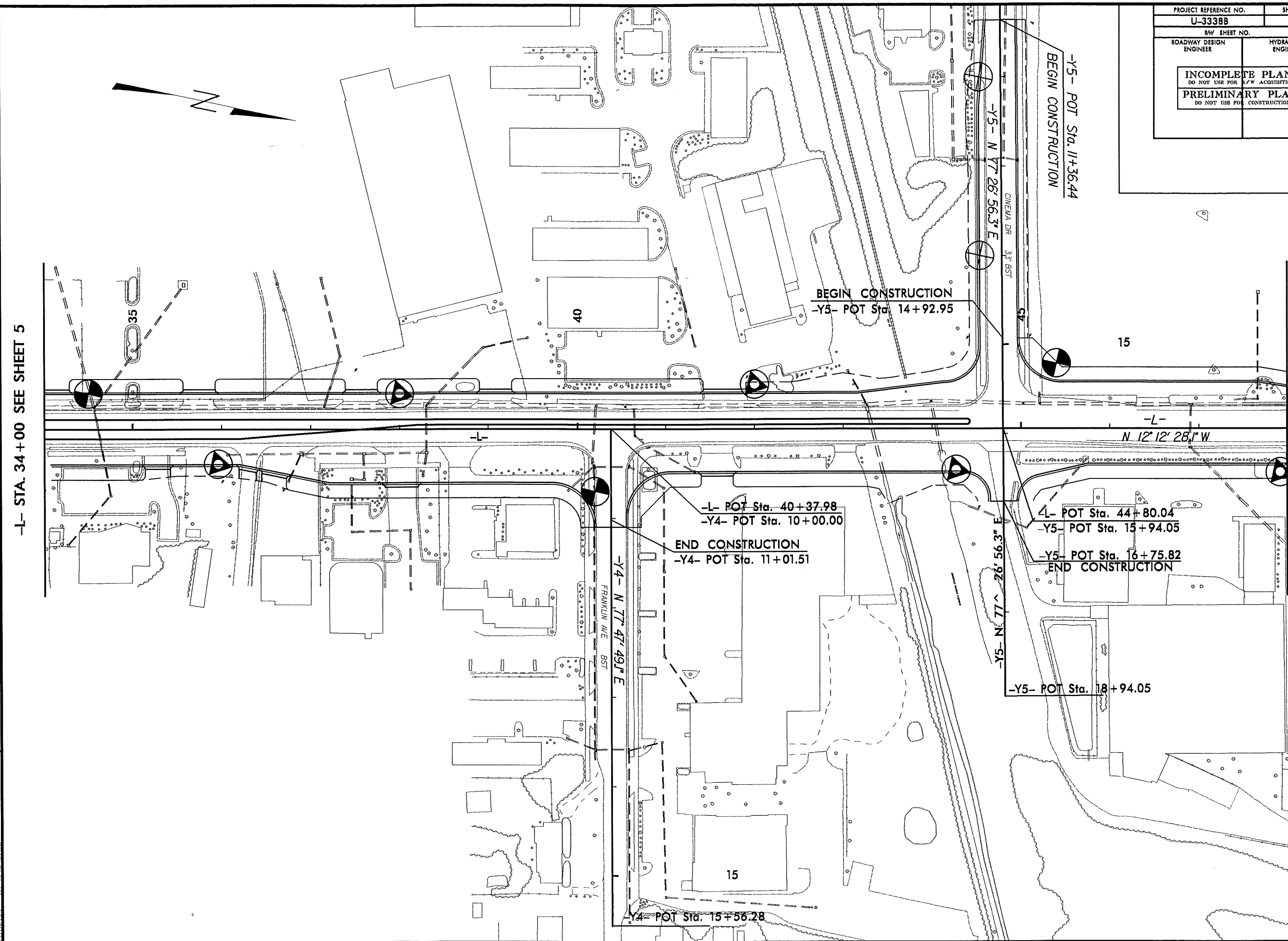
20

8/17/99  
REVISIONS  
3-SEP-2012 08:17  
L:\ERO\Greenville\_Investigation\TIP\U3338B\_GEO\RDWY\_CADD\_GEO\TECH\Site&Sub\U-3338B\_GEO\_RDY\_PLAN.5.dgn  
U-3338B

PROJECT REFERENCE NO.	SHEET NO.
U-3338B	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



8/17/99  
13-SEP-2012 08:48  
L:\ERO\Green\11g\_investigation\TIP\U3338B\_GEO\_RDWY\_CADD\_GEO\TECH\St\te&Sub\U-3338B\_GEO\_RDY\_PLAN.dgn  
REVISIONS  
-L- STA. 34+00 SEE SHEET 5



PROJECT REFERENCE NO.	SHEET NO.
U-3338B	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

-L- STA. 48+00 SEE SHEET 7

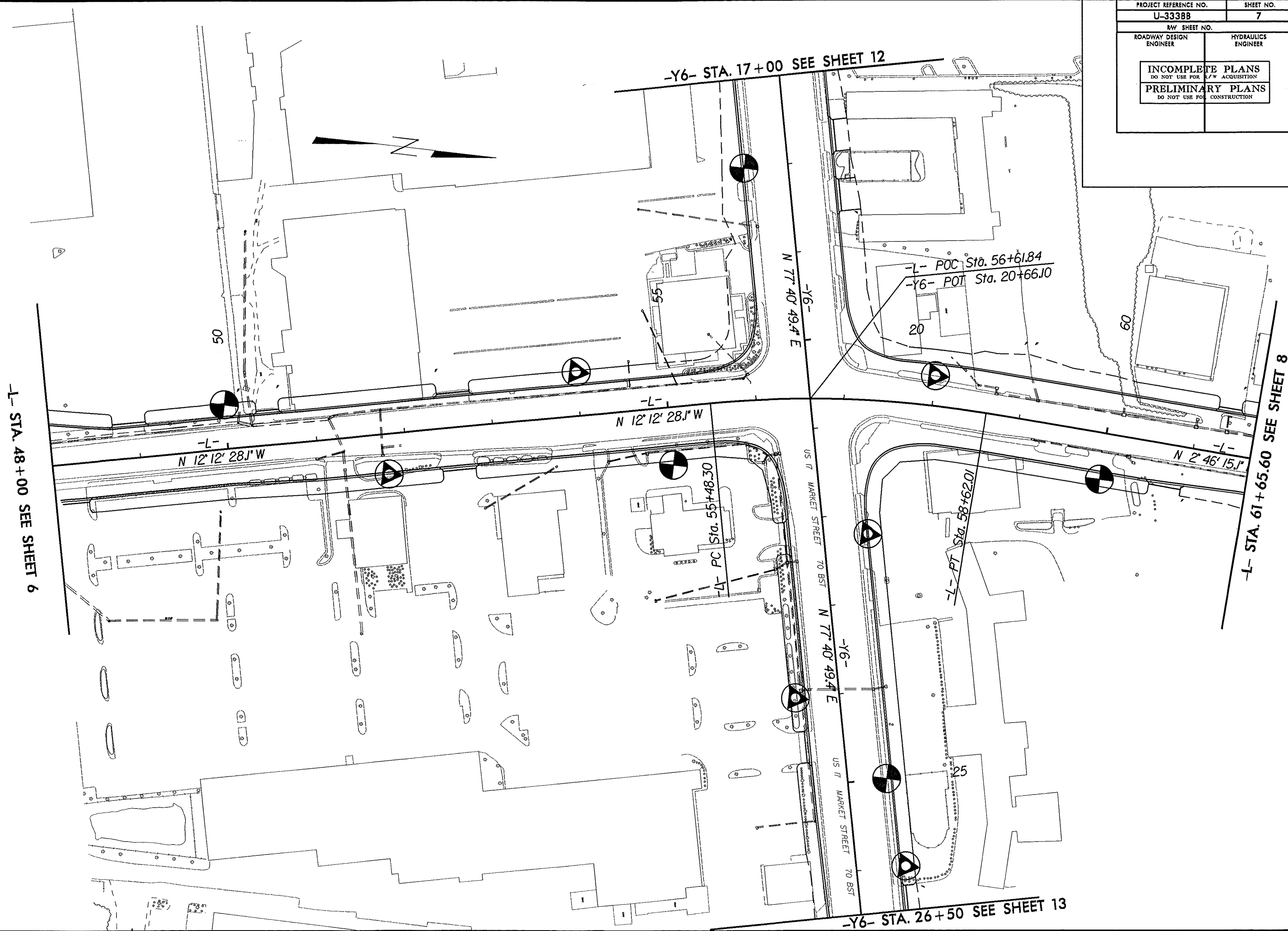
REVISIONS

PROJECT REFERENCE NO. U-3338B	SHEET NO. 7
MW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR E/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

-L- STA. 48+00 SEE SHEET 6

-Y6- STA. 17+00 SEE SHEET 12

-L- STA. 67+65.60 SEE SHEET 8



-Y6- STA. 26+50 SEE SHEET 13

8/17/99

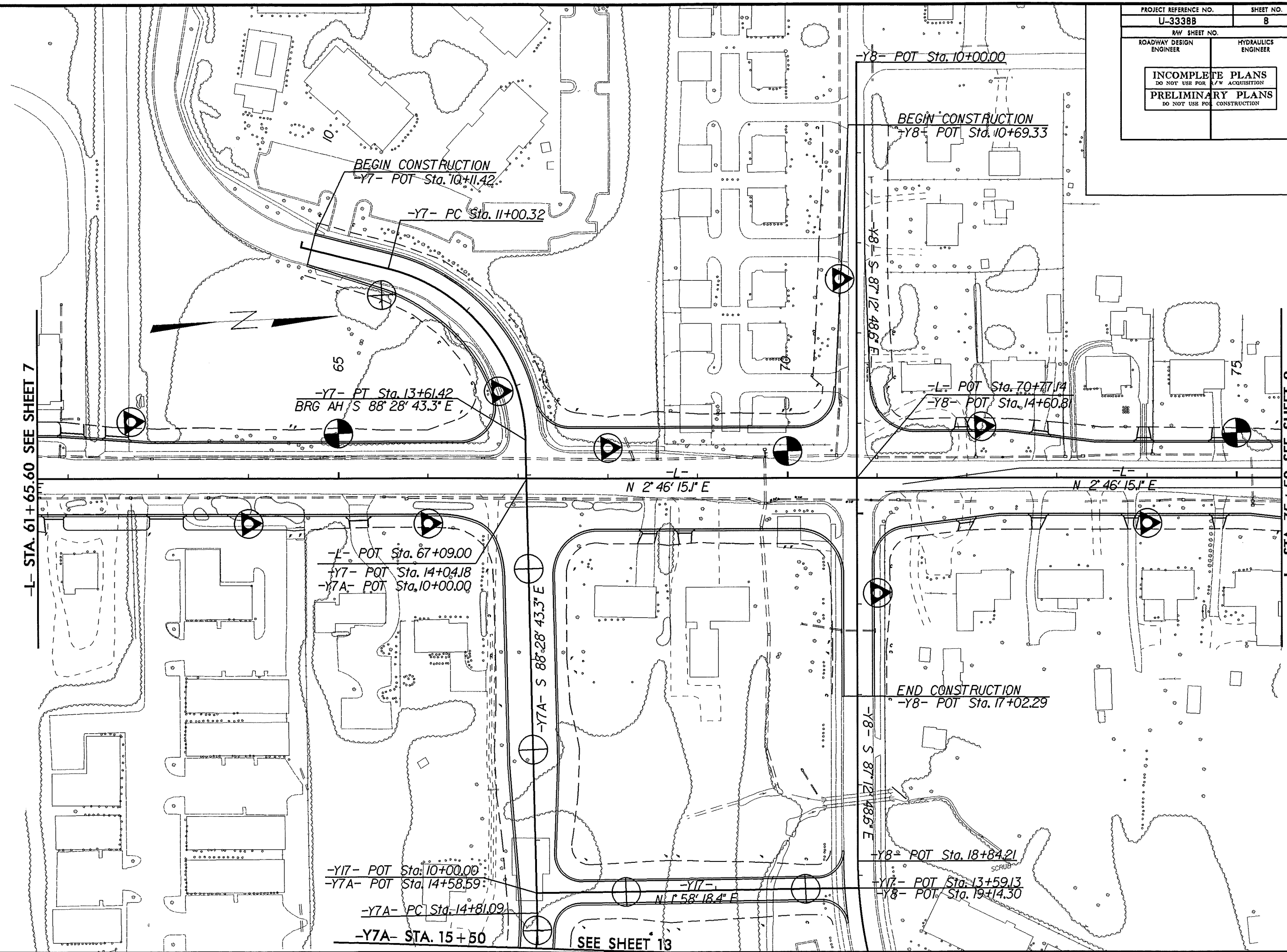
PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>B</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR S/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

REVISIONS

E:\SEP-2012 0819  
L:\VERO\GreenVillage\_Investigation\TIP\U3338B\_GEO\RDWY\CADD\_GEO\TECH\Sub\U-3338B\_GEO\_RDWY\_PLAN\_8.dgn  
Author: AT (162544)

-L- STA. 61+65.60 SEE SHEET 7

-L- STA. 75+50 SEE SHEET 9



SEE SHEET 13



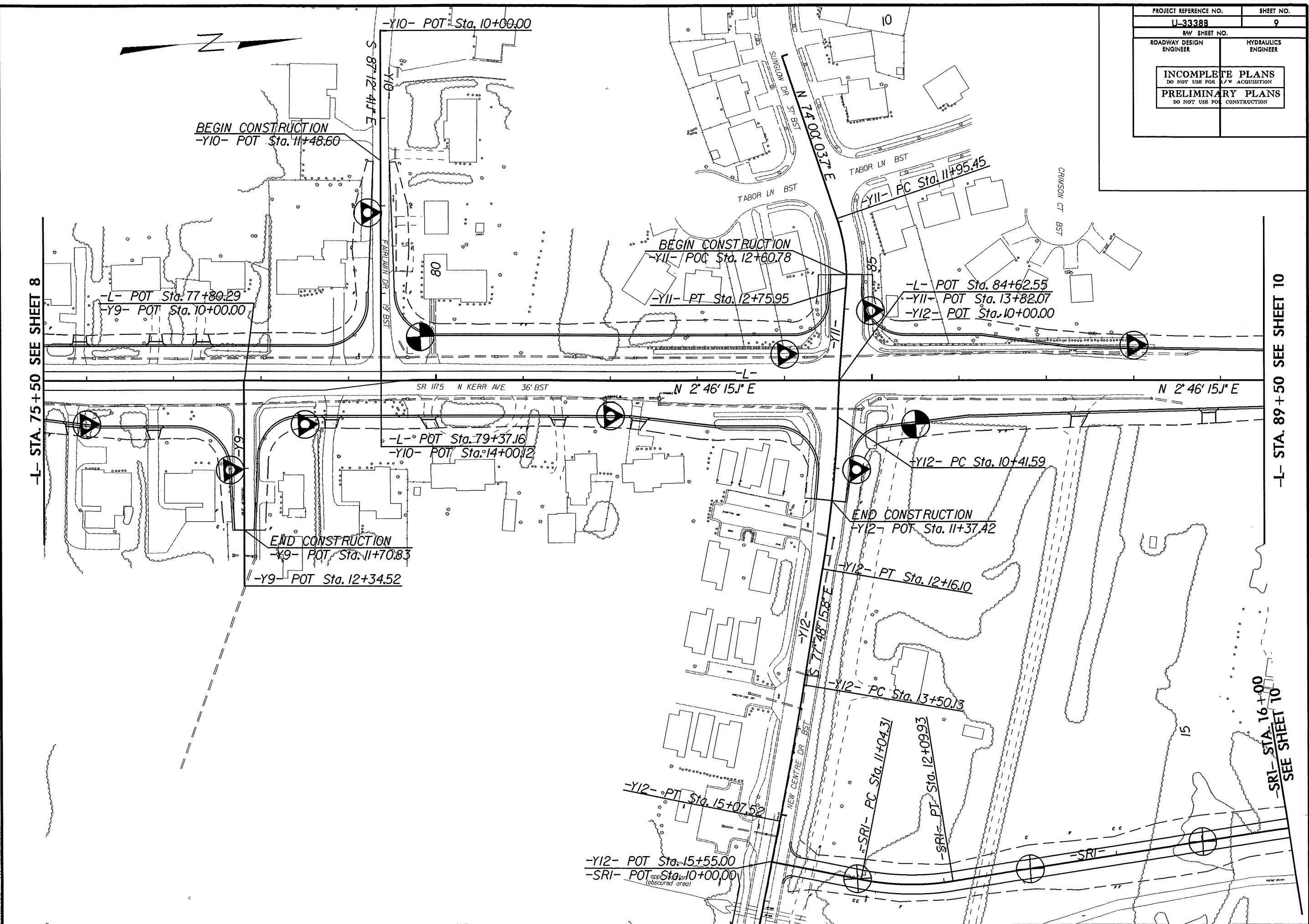
8/17/99

13-SEP-2012 08:20  
L:\VERO\Green\11g\_investigation\TIP\U33388\_GEO\RDWY\_CADD\_GEO\TECH\Site&Sub\U-33388\_GEO\_RDY\_PLAN\_9.dgn  
Document AT REF 201208

REVISIONS

-L- STA. 75+50 SEE SHEET 8

-L- STA. 89+50 SEE SHEET 10



PROJECT REFERENCE NO.	SHEET NO.
U-33388	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

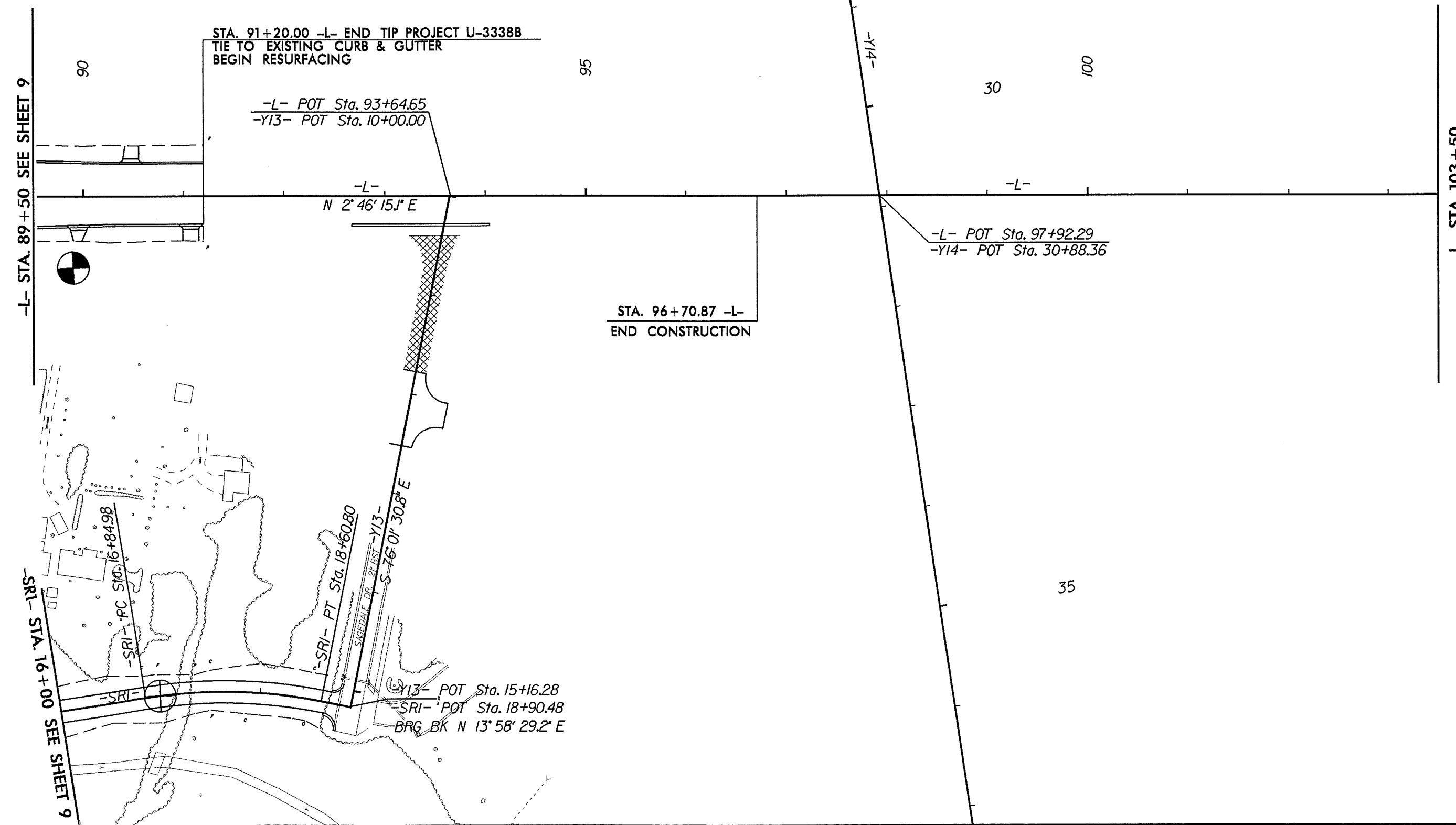
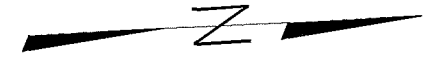
-SRI- STA. 16+00  
SEE SHEET 10

8/17/99

13-SEP-2012 08:05  
L:\V\0\Green\116\_investigation\TIP\U3338B.GEODATA\RDWY\_CADD\_GEO\TECHSITE\Sub\U-3338B\_GEO\_RDY\_PLAN\_10.dgn  
AT: RFE2554E

REVISIONS

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>10</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR A/W ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



-L- STA. 89+50 SEE SHEET 9

-SRI- STA. 16+00 SEE SHEET 9

STA. 91+20.00 -L- END TIP PROJECT U-3338B  
TIE TO EXISTING CURB & GUTTER  
BEGIN RESURFACING

-L- POT Sta. 93+64.65  
-Y13- POT Sta. 10+00.00

-L-  
N 2° 46' 15.1\"/>

STA. 96+70.87 -L-  
END CONSTRUCTION

-L- POT Sta. 97+92.29  
-Y14- POT Sta. 30+88.36

-Y13- POT Sta. 15+16.28  
-SRI- POT Sta. 18+90.48  
BRG BK N 13° 58' 29.2\"/>

-SRI- PT Sta. 18+60.80  
SAGEDALE DR 21.81 FT  
-Y13-  
S 76° 01' 30.8\"/>

-SRI- PC Sta. 16+84.98

-SRI-

90

95

30

100

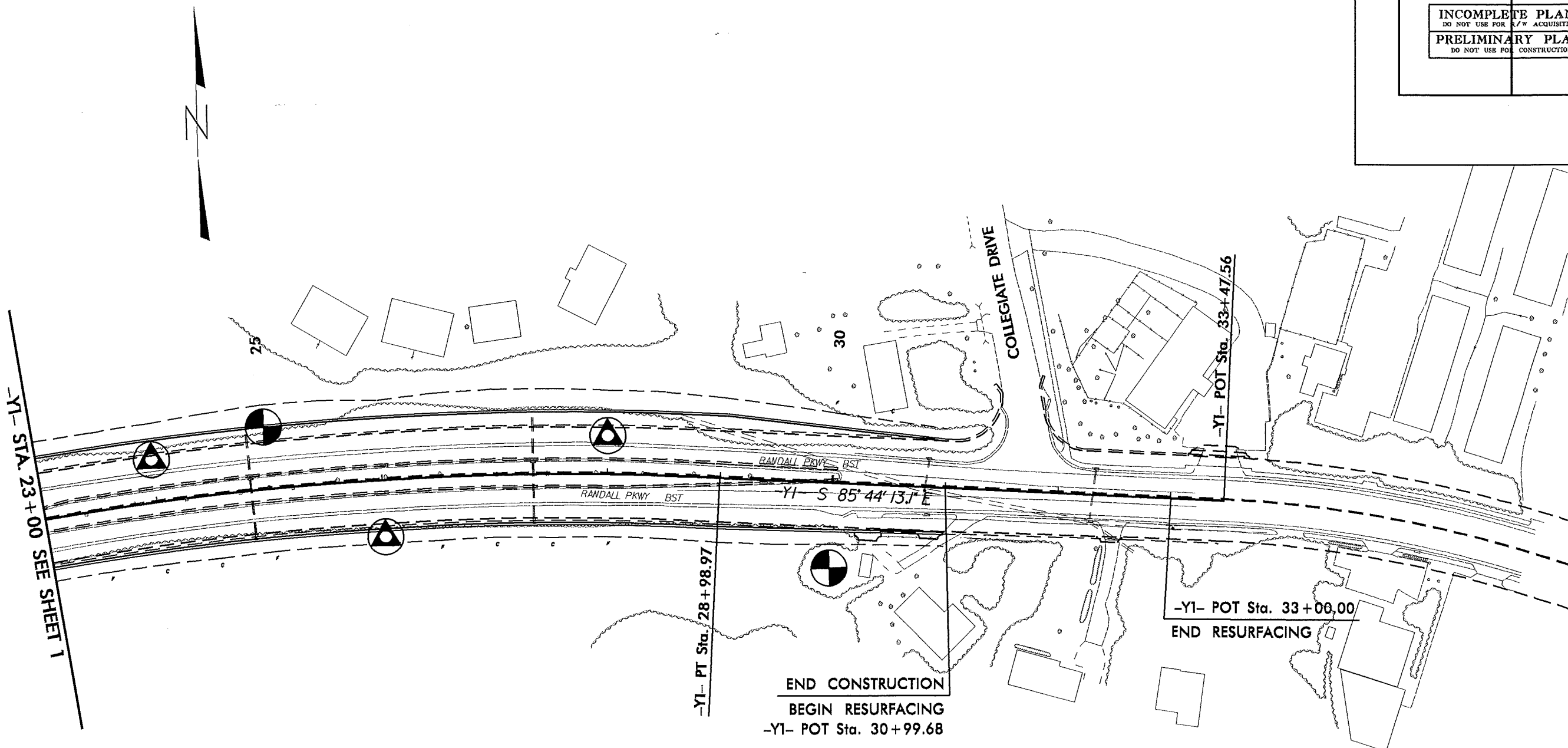
35

-L- STA. 103+50

PROJECT REFERENCE NO.	SHEET NO.
U-3338B	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

REVISIONS

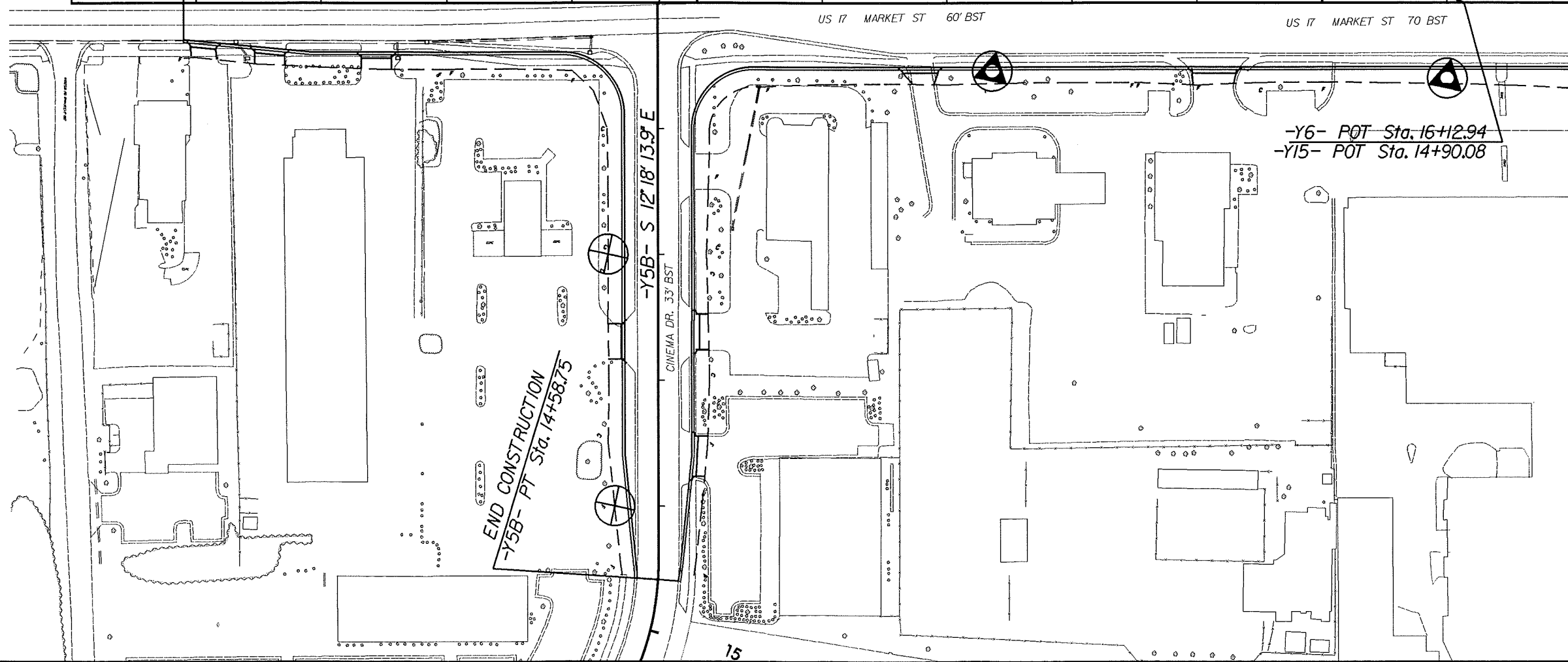
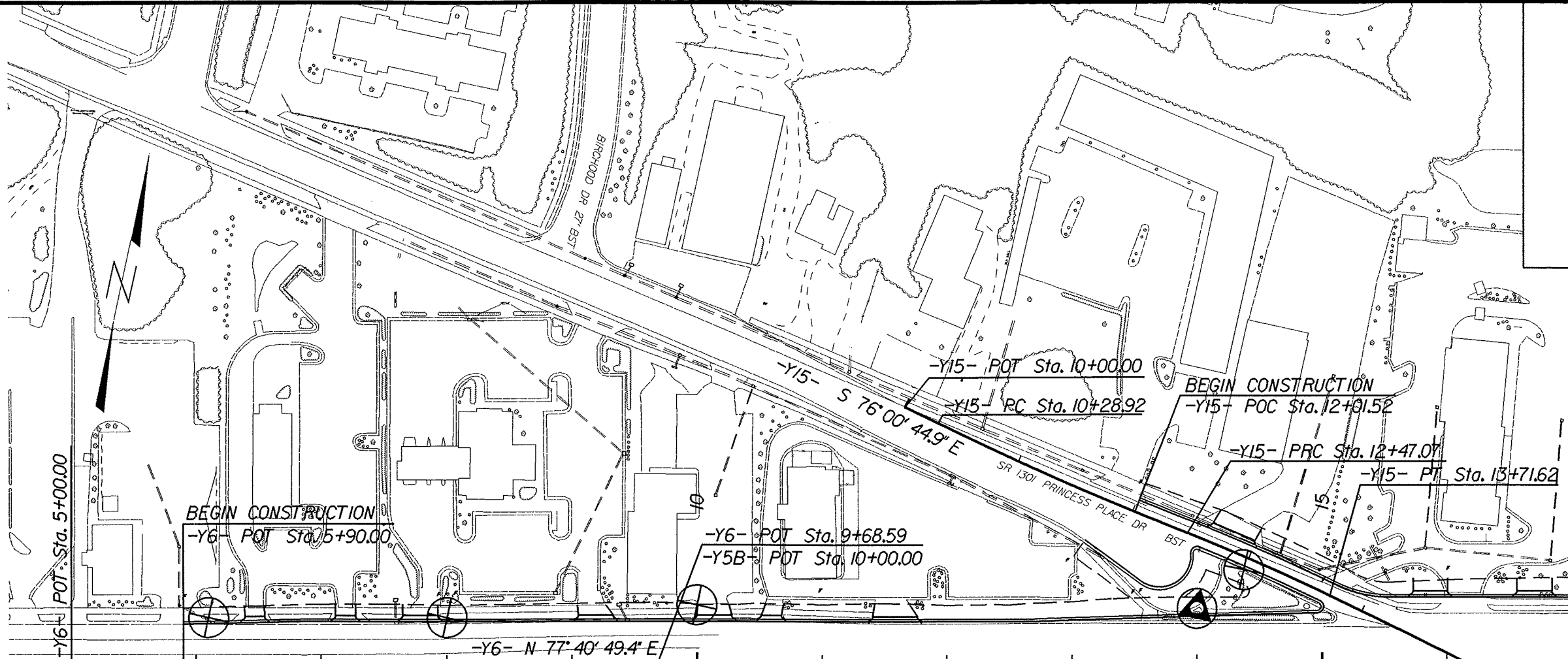
I:\3-SEP-2012\_08407  
 L:\FRO\Green\11g\_investigation\TIP\_U3338B.GEO\RDWY\CADD\_GEO\TECH\Site\Sub\U-3338B.GEO\RDY\_PLAN.11.dgn  
 8/17/99



**END CONSTRUCTION**  
**BEGIN RESURFACING**  
 -Y1- POT Sta. 30+99.68

-Y1- POT Sta. 33+00.00  
**END RESURFACING**

PROJECT REFERENCE NO.	SHEET NO.
U-3338B	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR E/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



-Y6- STA. 17+00 SEE SHEET 7

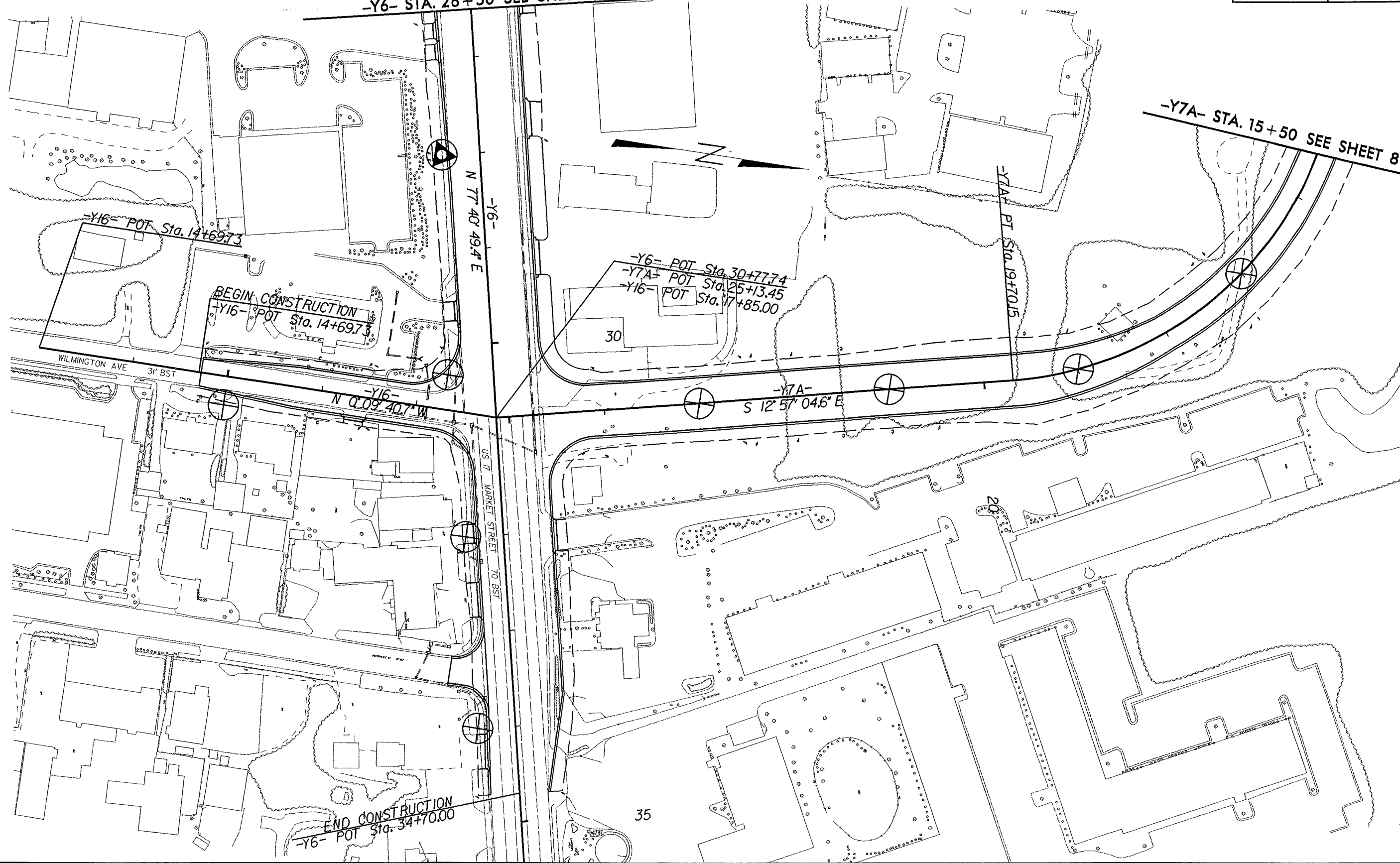
REVISIONS

8/17/99  
 I:\3-SEP-2012 08:08  
 L:\FRO\Greenville\_Investigation\TIP\_U3338B\_GEO\RDWY\CADD\_GEO\TECH\Site&Sub\U-3338B\_GEO\_RDY\_PLAN\_12.dgn  
 15

PROJECT REFERENCE NO.	SHEET NO.
U-3338B	13
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

-Y6- STA. 26+50 SEE SHEET 7

-Y7A- STA. 15+50 SEE SHEET 8

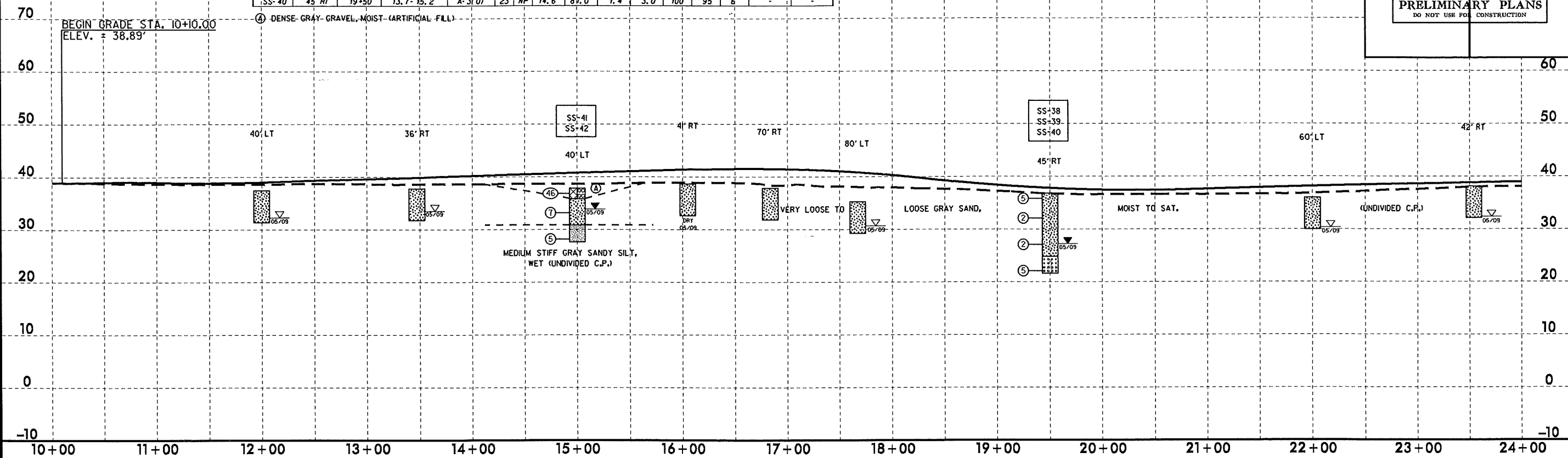


REVISIONS

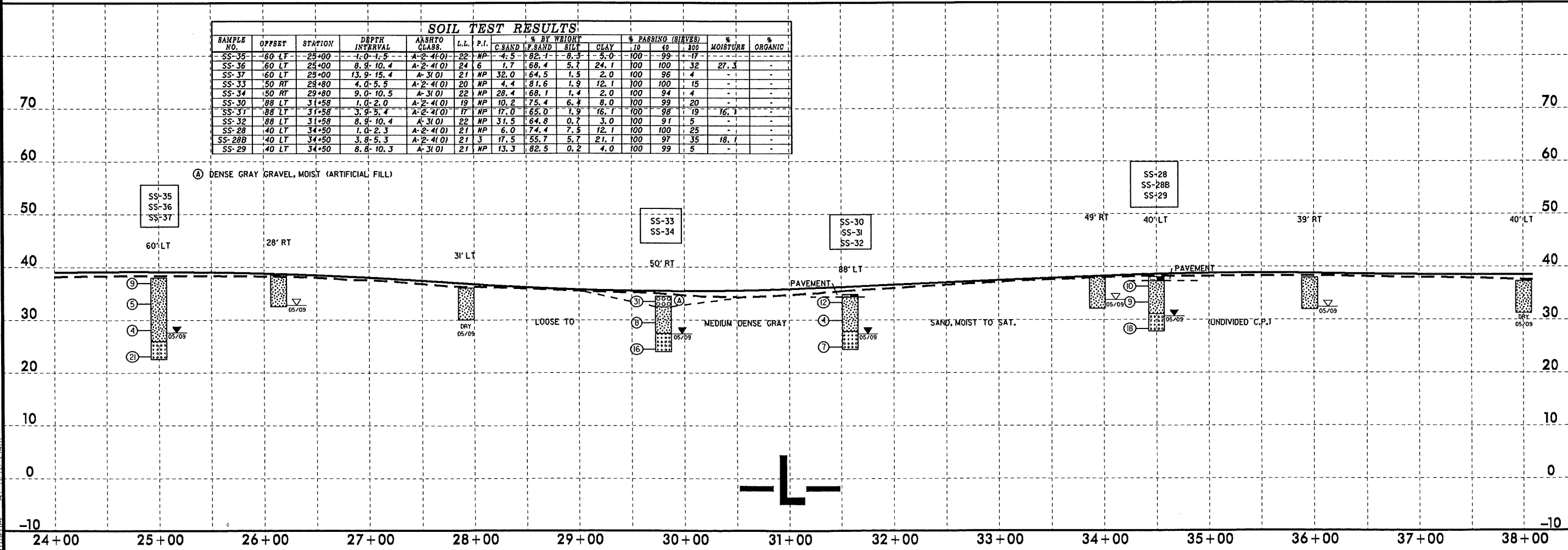
8/17/99

I:\3-SEP-2012 08:13 L:\ERON\p\erov\1\1\investigation\TIP\_U3338B\_DE\RDWY\CADD\_GEO\TECH\Str\to&Sub\U-3338B\_GEO\_RDY\_PLAN13.dgn

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	10	40	200		
SS-41	40' LT	15+00	3.7-5.2	A-2-M(0)	24	21	2.6	72.8	5.5	19.1	100	100	31	18.3
SS-42	40' LT	15+00	8.7-10.2	A-4(0)	27	9	4.1	67.9	4.8	29.1	100	99	37	-
SS-38	45' RT	19+50	1.0-1.5	A-2-M(0)	24	NP	2.5	84.1	8.3	5.0	100	99	17	-
SS-39	45' RT	19+50	9.2-10.2	A-2-M(0)	22	1	4.2	77.4	6.3	18.1	100	99	29	33.8
SS-40	45' RT	19+50	13.7-15.2	A-3(0)	23	NP	14.6	81.0	1.4	3.0	100	95	6	-



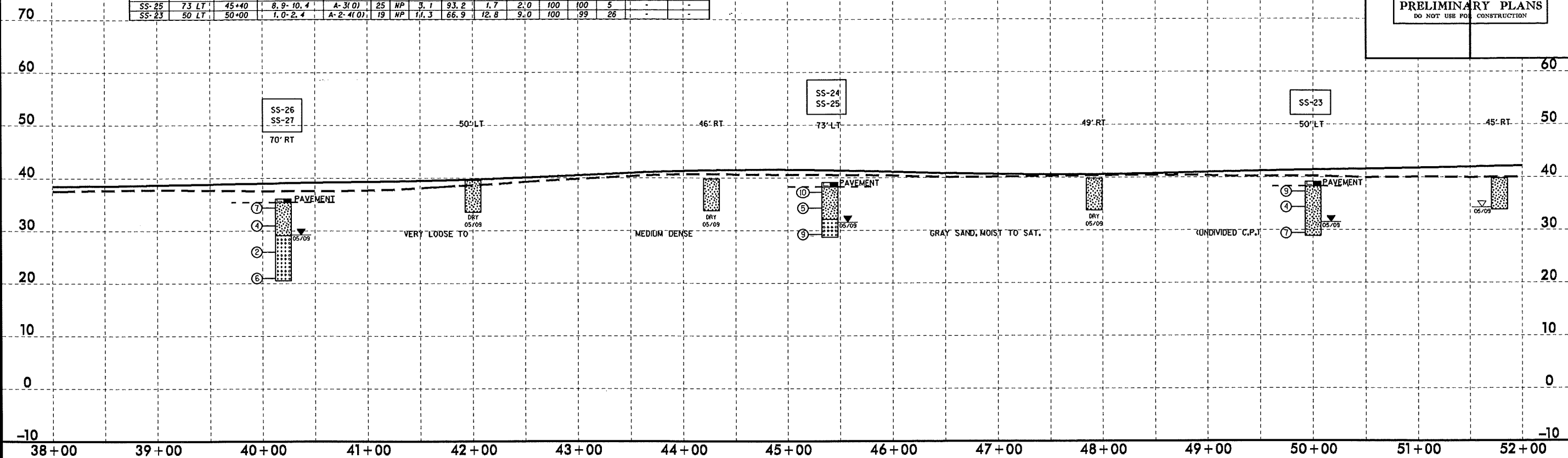
SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	10	40	200		
SS-35	60' LT	25+00	1.0-1.5	A-2-M(0)	22	NP	4.5	82.1	2.3	5.0	100	99	17	-
SS-36	60' LT	25+00	8.9-10.4	A-2-M(0)	24	6	1.7	68.4	5.7	24.1	100	100	32	27.3
SS-37	60' LT	25+00	13.9-15.4	A-3(0)	21	NP	32.0	64.5	1.5	2.0	100	96	4	-
SS-33	50' RT	29+80	4.0-5.5	A-2-M(0)	20	NP	4.4	81.6	1.9	12.1	100	100	15	-
SS-34	50' RT	29+80	9.0-10.5	A-2-M(0)	22	NP	28.4	68.1	1.4	2.0	100	94	4	-
SS-30	88' LT	31+58	1.0-2.0	A-2-M(0)	19	NP	10.2	75.4	6.4	8.0	100	93	20	-
SS-31	88' LT	31+58	3.9-5.4	A-2-M(0)	17	NP	17.0	65.0	1.9	16.1	100	96	19	16.1
SS-32	88' LT	31+58	8.9-10.4	A-3(0)	22	NP	31.5	64.8	0.7	3.0	100	91	5	-
SS-28	40' LT	34+50	1.0-2.3	A-2-M(0)	21	NP	6.0	74.4	7.5	12.1	100	100	25	-
SS-28B	40' LT	34+50	3.8-5.3	A-2-M(0)	21	3	17.5	55.7	5.7	21.1	100	97	35	18.1
SS-29	40' LT	34+50	8.8-10.3	A-3(0)	21	NP	13.3	82.5	0.2	4.0	100	99	5	-



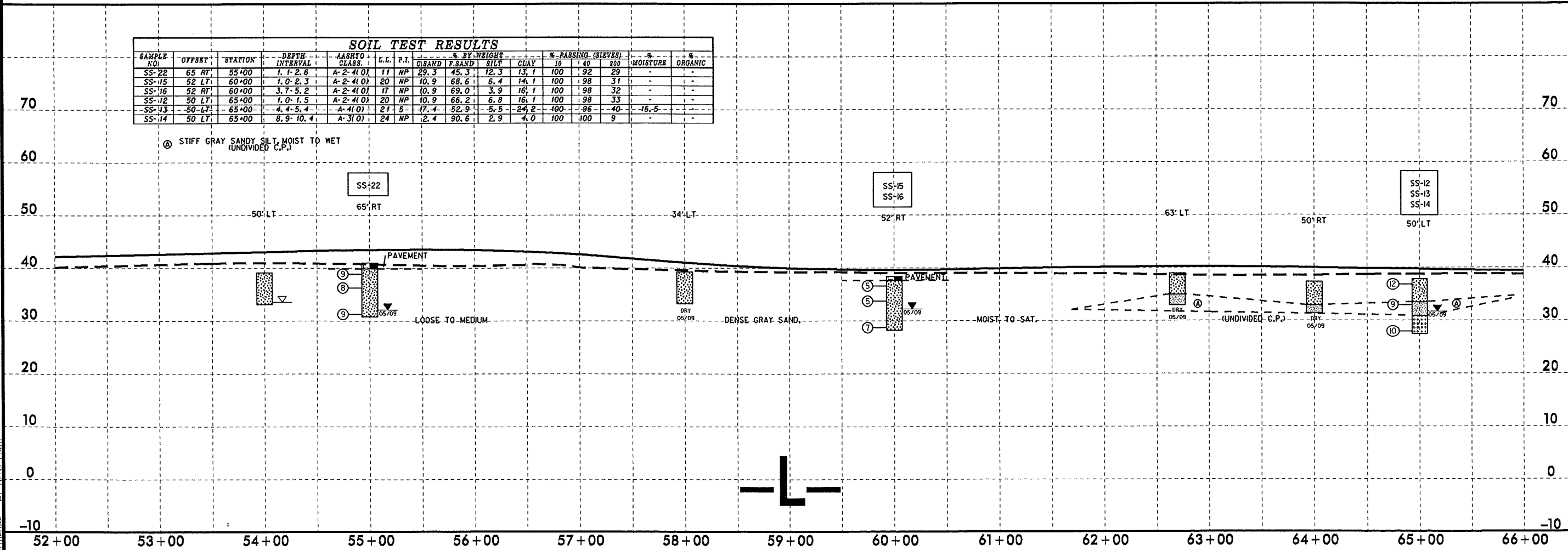
5/28/99  
 I:\3-SEP-2012 08:41  
 L:\VFO\Greenville\_Investigation\TIP\U3338B\_GEO\_RDWY\CADD\_GEO\TECHN\Plan\Prof\U-3338B\_GEO\_RDWY\_L\_PFI.dgn  
 14



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-26	70 RT	40+20	1.0-2.2	A-2-4(0)	19	NP	9.6	73.6	8.7	8.0	100	99	22	-	-
SS-27	70 RT	40+20	14.1-15.6	A-3(0)	22	NP	16.5	80.3	1.2	2.0	100	99	4	-	-
SS-24	73 LT	45+40	1.0-2.4	A-2-4(0)	16	NP	5.6	73.5	7.9	13.1	100	99	24	-	-
SS-25	73 LT	45+40	8.9-10.4	A-3(0)	25	NP	9.1	93.2	1.7	2.0	100	100	5	-	-
SS-23	50 LT	50+00	1.0-2.4	A-2-4(0)	19	NP	11.3	66.9	12.8	9.0	100	99	26	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-22	65 RT	55+00	1.1-2.6	A-2-4(0)	11	NP	29.3	45.3	12.3	13.1	100	92	29	-	-
SS-15	52 LT	60+00	1.0-2.3	A-2-4(0)	20	NP	10.9	68.6	6.4	14.1	100	98	31	-	-
SS-16	52 RT	60+00	3.7-5.2	A-2-4(0)	17	NP	10.9	69.0	3.9	16.1	100	98	32	-	-
SS-12	50 LT	65+00	1.0-1.5	A-2-4(0)	20	NP	10.9	66.2	6.8	16.1	100	98	33	-	-
SS-13	50 LT	65+00	4.4-5.4	A-4(0)	24	S	17.4	52.9	5.5	24.2	100	96	40	15.5	-
SS-14	50 LT	65+00	8.9-10.4	A-3(0)	24	NP	2.4	90.6	2.9	4.0	100	100	9	-	-

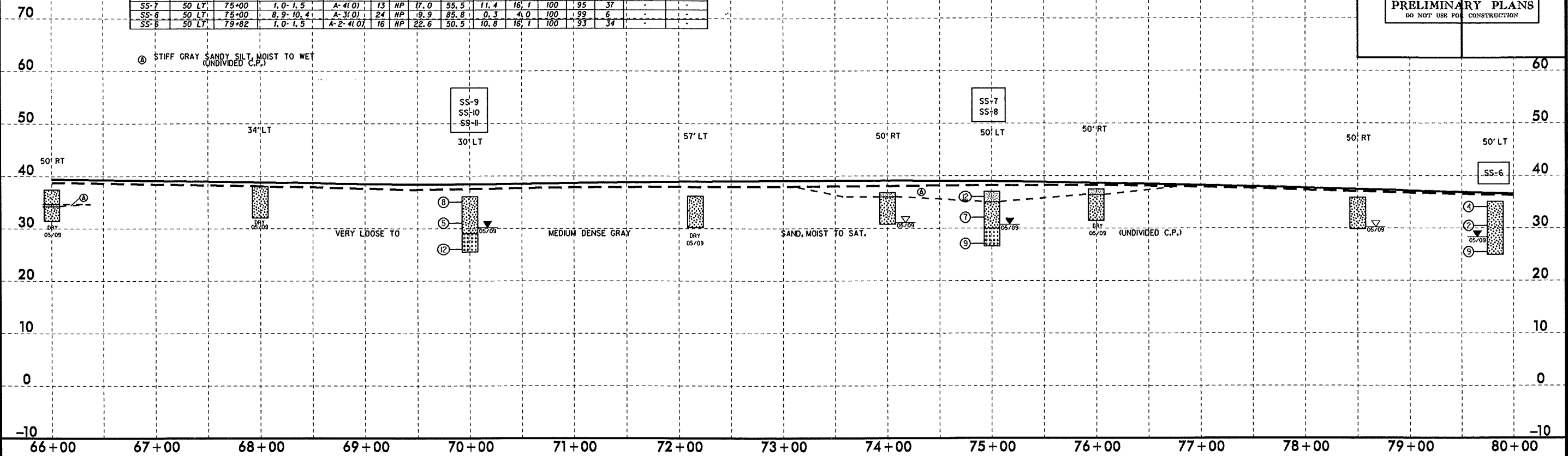


5/28/99  
 3-SEP-2012 08:43  
 L:\VPO\Green\116\_Investigation\TIP\U3338B-GEO-RDWAY-CADD-GEO\TECH\Plan\Prof\U-3338B-GEO-RDWAY-L\_PFI2.dgn  
 AT: REF: 25/21

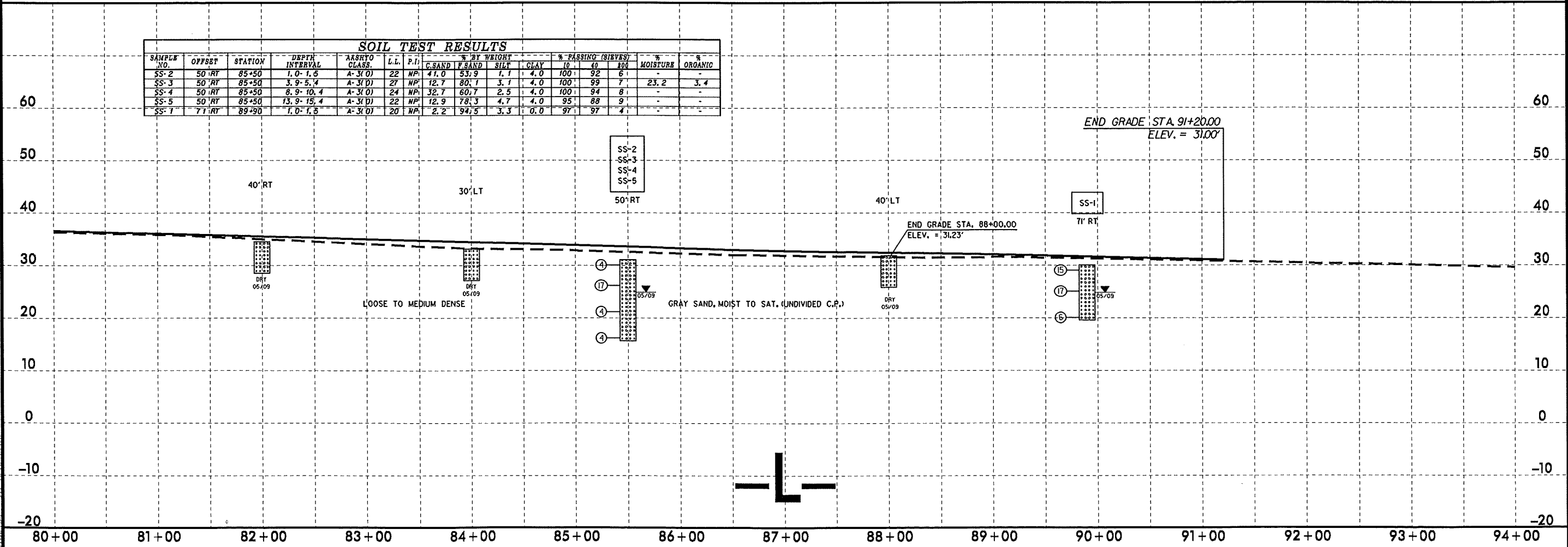
5/28/99

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>16</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	#10	#20		
SS-9	30 LT	70+00	1.0-1.5	A-2-4(0)	18	NP	36.9	49.2	3.7	10.1	77	64	14	-
SS-10	30 LT	70+00	4.0-5.5	A-2-4(0)	17	NP	16.7	60.3	5.3	18.2	100	96	33	15.6
SS-11	30 LT	70+00	9.0-10.5	A-3(0)	22	NP	15.7	67.8	2.5	4.0	100	100	9	-
SS-7	50 LT	75+00	1.0-1.5	A-4(0)	13	NP	17.0	55.5	11.4	16.1	100	95	37	-
SS-8	50 LT	75+00	8.9-10.4	A-3(0)	24	NP	19.9	85.8	0.3	4.0	100	99	6	-
SS-6	50 LT	79+82	1.0-1.5	A-2-4(0)	16	NP	22.6	50.5	10.8	16.1	100	93	34	-

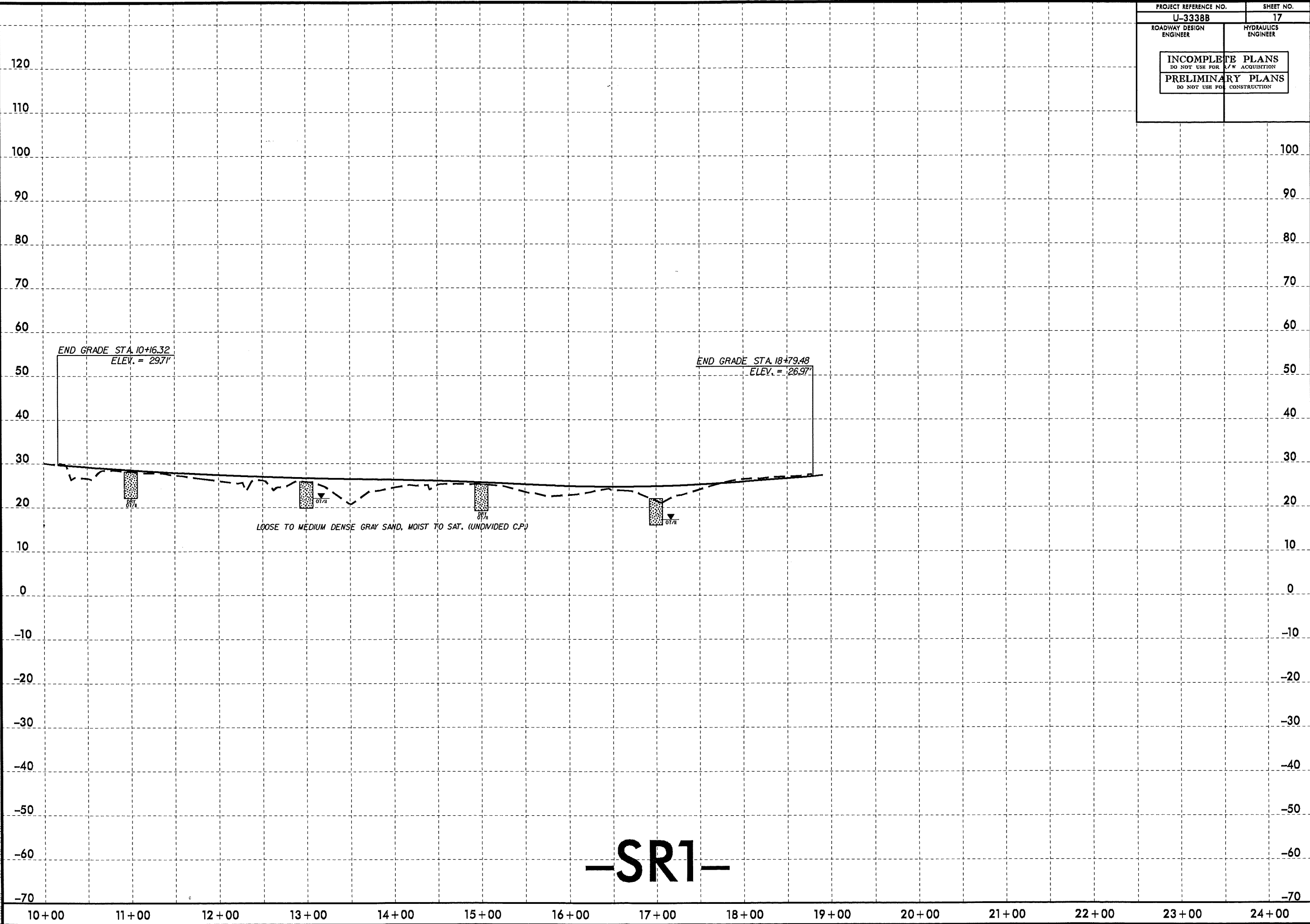


SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	#10	#20		
SS-2	50 RT	85+50	1.0-1.5	A-3(0)	22	NP	41.0	53.9	1.1	4.0	100	92	6	-
SS-3	50 RT	85+50	3.9-5.4	A-3(0)	27	NP	12.7	80.7	3.1	4.0	100	99	7	23.2
SS-4	50 RT	85+50	8.9-10.4	A-3(0)	24	NP	32.7	60.7	2.5	4.0	100	94	8	3.4
SS-5	50 RT	85+50	13.9-15.4	A-3(0)	22	NP	12.9	78.3	4.7	4.0	95	88	9	-
SS-1	71 RT	89+90	1.0-1.5	A-3(0)	20	NP	2.2	94.5	3.3	0.0	97	97	4	-



I:\3-SEP-2002 08:44  
 L:\INFO\GreenVillage\_Inv\station\TIP\U3338B.GEO.ROWY.CADD.GEOTECH\Plan\Prof\U-3338B.GEO.RDY\_LL.PFI3.dgn  
 Author: AT (625545)

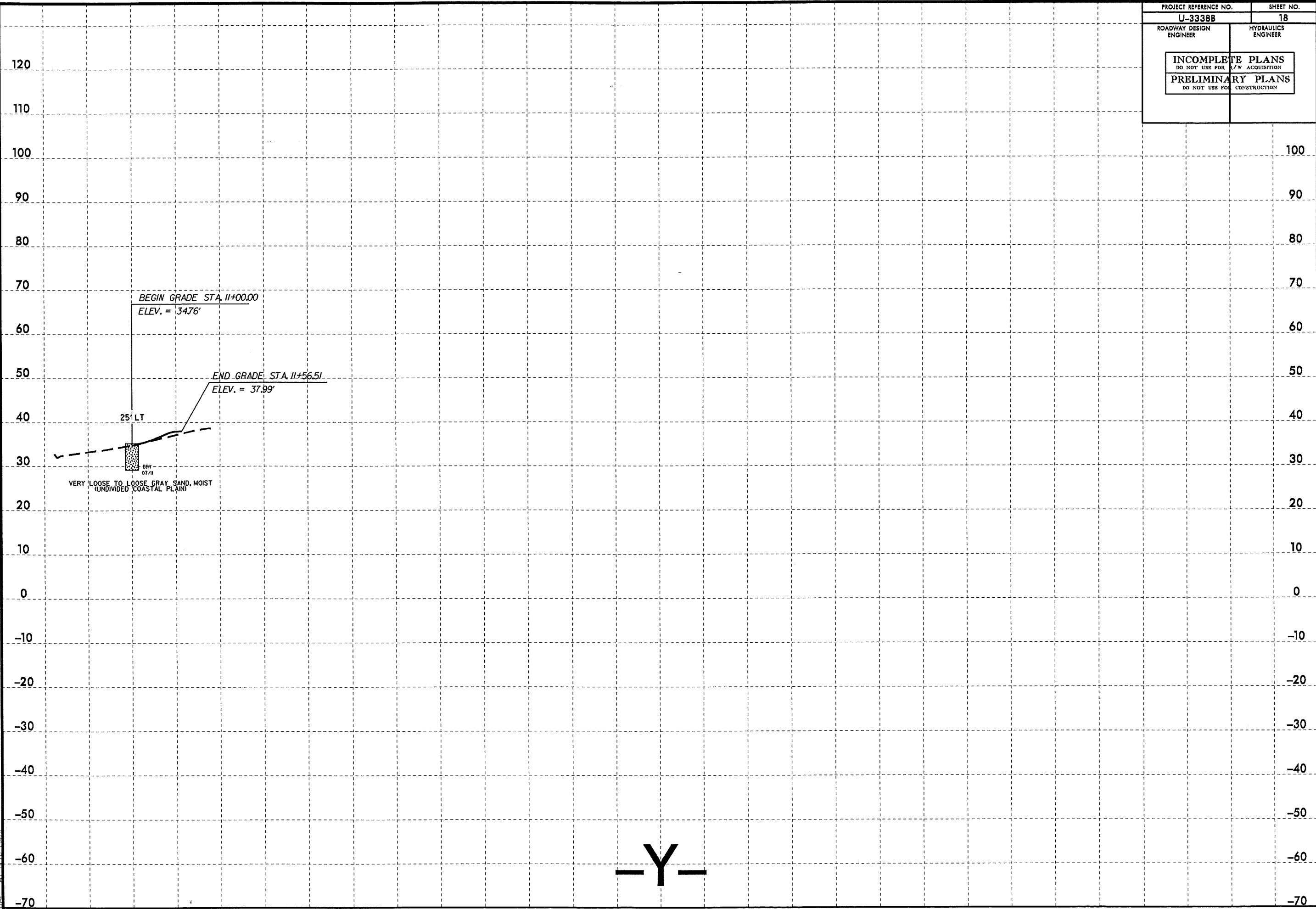
PROJECT REFERENCE NO. U-3338B	SHEET NO. 17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



-SR1-

5/14/99  
 I:\SEP-2012 08:35  
 L:\Vero\Green\116\_investigation\TIP\U3338B.GEO\_ROWY\_CADD\_GEO TECH\PlanProf\U-3338.GEO\_ROWY\_SRI\_PFI1.dgn  
 AT: PFI2552481

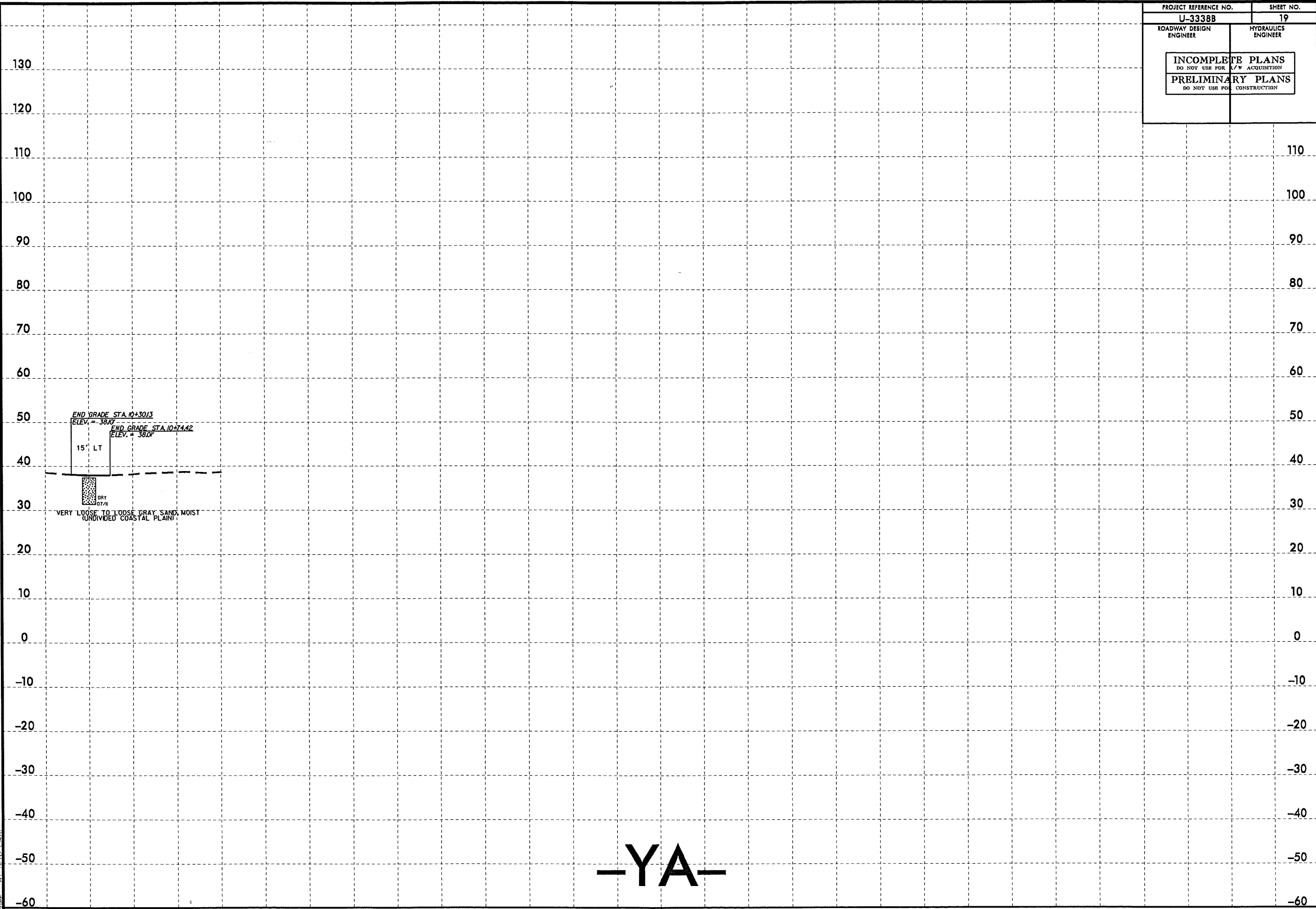
PROJECT REFERENCE NO.	SHEET NO.
U-3338B	18
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



5/14/99  
 13-SEP-2012 08:36  
 L:\VERO\Greenville\_Investigation\TIP\U3338B\_GEO\_ROWY\_CADD\_GEO\TECH\PlanPr\of\U-3338-GEO\_RDY\_Y-PF11.dgn  
 AT REF:255481

-Y-

PROJECT REFERENCE NO.	SHEET NO.
U-3338B	19
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

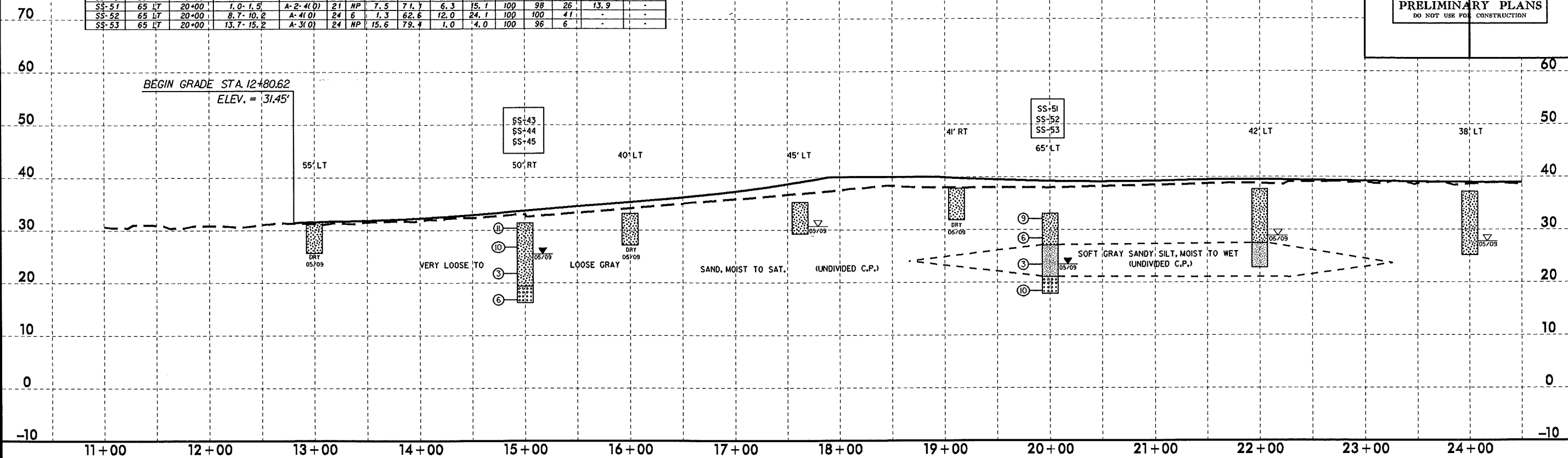


-YA-

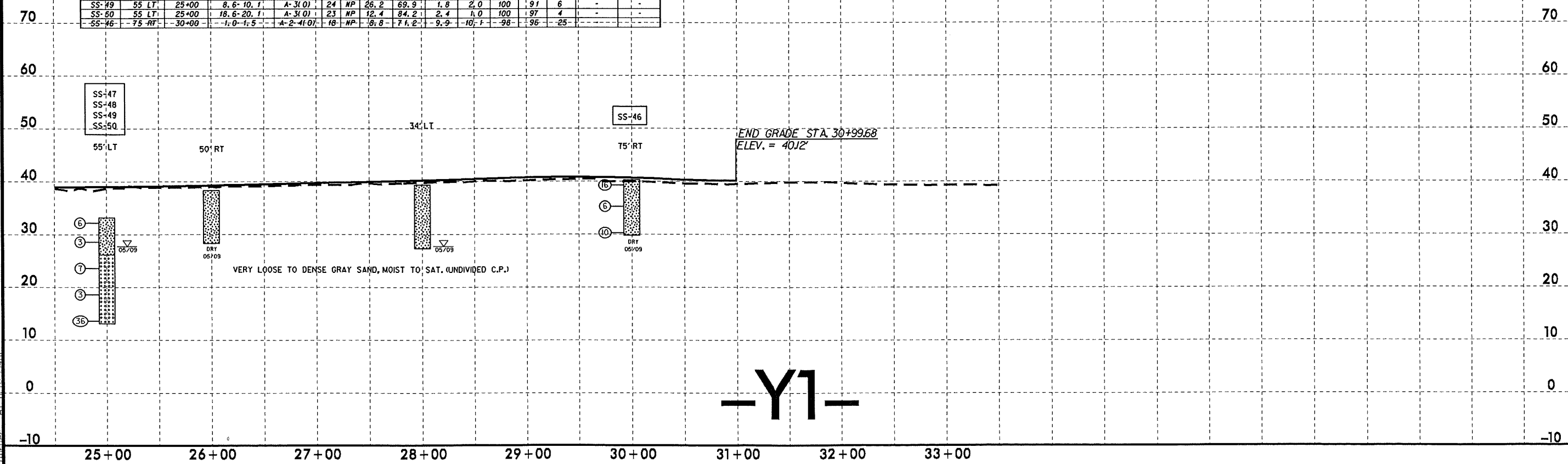
5/14/99  
 3-SEP-2012 08:41  
 L:\FERO\Greenville\_Investigation\TIP\U3338B.GEO.RDWY.CADD.GEOTECH\PlanPr of U-3338.GEO.RDY\_YA.PFI1.dgn  
 Computer AT REF2524E

10+00      11+00      12+00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.L.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-43	50 RT	15+00	1.0-1.5	A-2-4(0)	24	NP	28.3	58.3	7.3	6.0	100	94	15	-	-
SS-44	50 RT	15+00	8.6-10.1	A-2-4(0)	16	NP	3.2	71.8	5.9	19.1	100	99	28	27.2	-
SS-45	50 RT	15+00	13.6-15.1	A-3(0)	21	NP	30.2	67.0	0.8	12.0	100	90	3	-	-
SS-51	65 LT	20+00	1.0-1.5	A-2-4(0)	21	NP	7.5	71.1	6.3	15.1	100	98	26	13.9	-
SS-52	65 LT	20+00	8.7-10.2	A-4(0)	24	6	1.3	62.6	12.0	24.1	100	100	41	-	-
SS-53	65 LT	20+00	13.7-15.2	A-3(0)	24	NP	15.6	79.4	1.0	4.0	100	96	6	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.L.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-47	55 LT	25+00	1.0-1.5	A-2-4(0)	19	NP	2.1	75.7	10.2	12.1	98	97	26	-	-
SS-48	55 LT	25+00	3.6-5.1	A-2-4(0)	22	NP	0.2	77.2	4.5	18.1	100	100	25	-	-
SS-49	55 LT	25+00	8.6-10.1	A-3(0)	24	NP	26.2	69.9	1.8	2.0	100	91	6	-	-
SS-60	55 LT	25+00	18.6-20.1	A-3(0)	23	NP	12.4	84.2	2.4	1.0	100	97	4	-	-
SS-46	75 RT	30+00	1.0-1.5	A-2-4(0)	18	NP	8.8	71.2	9.9	10.1	98	96	25	-	-

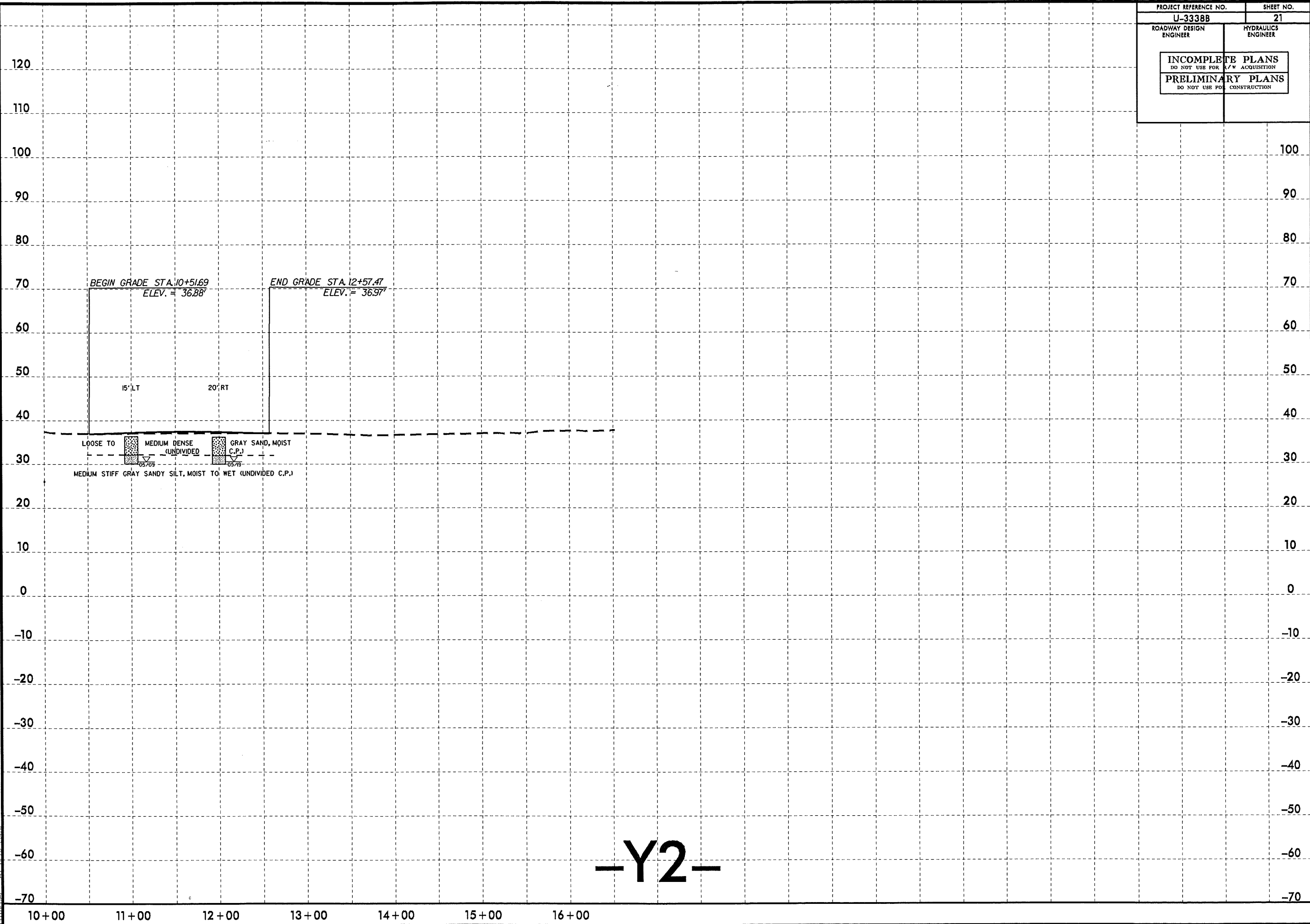


-Y1-

5/28/99  
 13-SEP-2012 08:36  
 L:\VFO\Greenville\_Investigation\TIP\U3338B\_GEO\_RDWY\CADD\_GEO\TECH\Plan\Prof\U-3338B\_GEO\_RDWY\_Y1\_PL14.dgn  
 Author: AT REF355481



PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>21</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR R/W ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



BEGIN GRADE STA. 10+51.69  
ELEV. = 36.88'

END GRADE STA. 12+57.47  
ELEV. = 36.97'

15' LT      20' RT

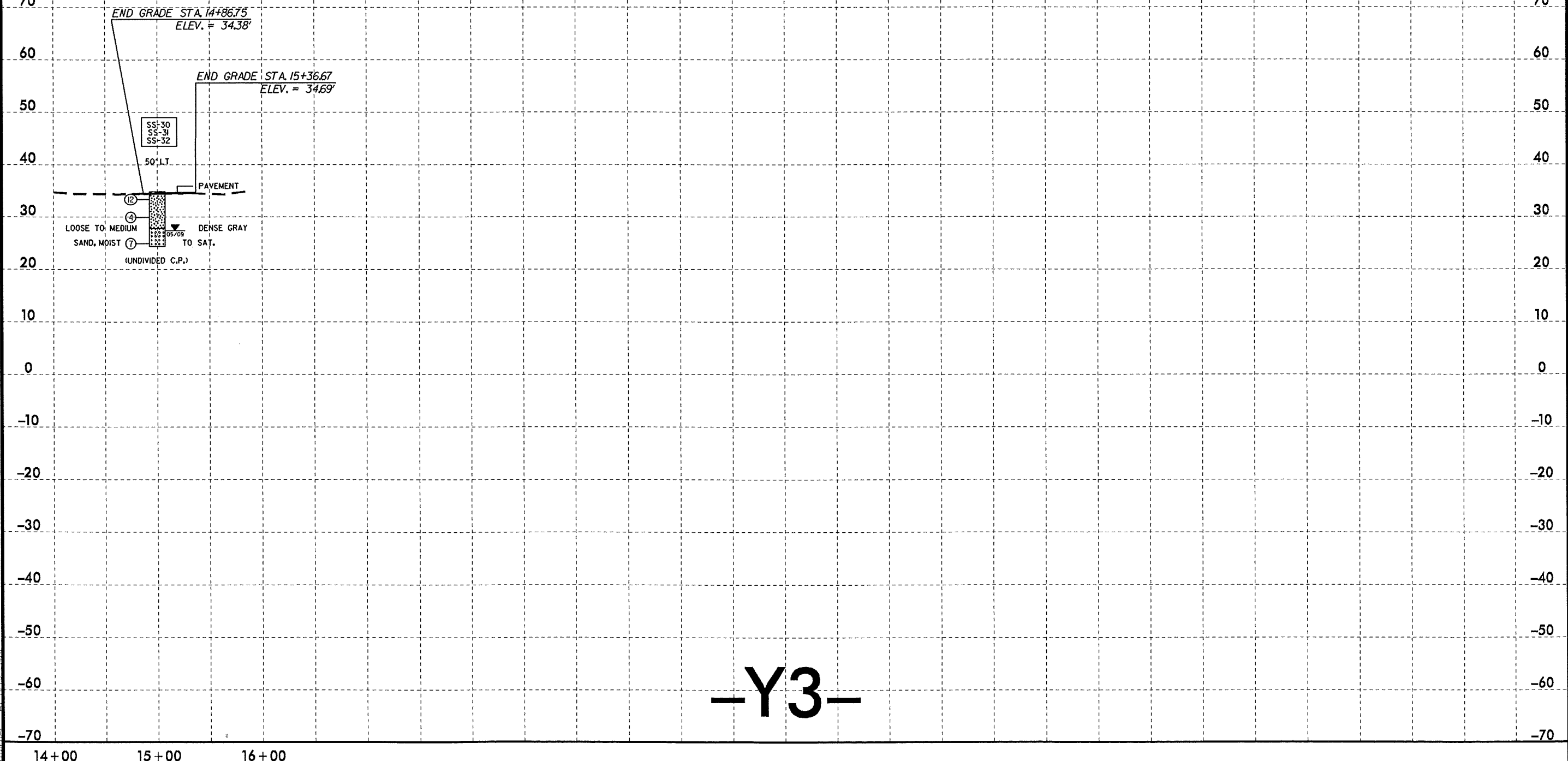
LOOSE TO MEDIUM DENSE (UNDIVIDED) GRAY SAND, MOIST C.P.)  
05/709      05/709

MEDIUM STIFF GRAY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)

**-Y2-**

5/14/99  
  
 13-SEP-2012 08:37  
 L:\Vero\Greenville\_Investigation\TIP\U3338B\_GEO\_RDWY\CADD\_GEO\TECH\PlanPr of U-3338-GEO\_RDY-Y2-PF11.dgn  
 Author: AT (R2554E)

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-30	50 LT	15+00	1.0-2.0	A-2-4(0)	19	NP	10.2	75.4	6.4	8.0	100	99	20	-	-
SS-31	50 LT	15+00	3.9-5.4	A-2-4(0)	17	NP	17.0	65.0	1.9	16.1	100	98	19	16.1	-
SS-32	50 LT	15+00	8.9-10.4	A-3(0)	22	NP	31.5	64.8	0.7	3.0	100	91	5	-	-

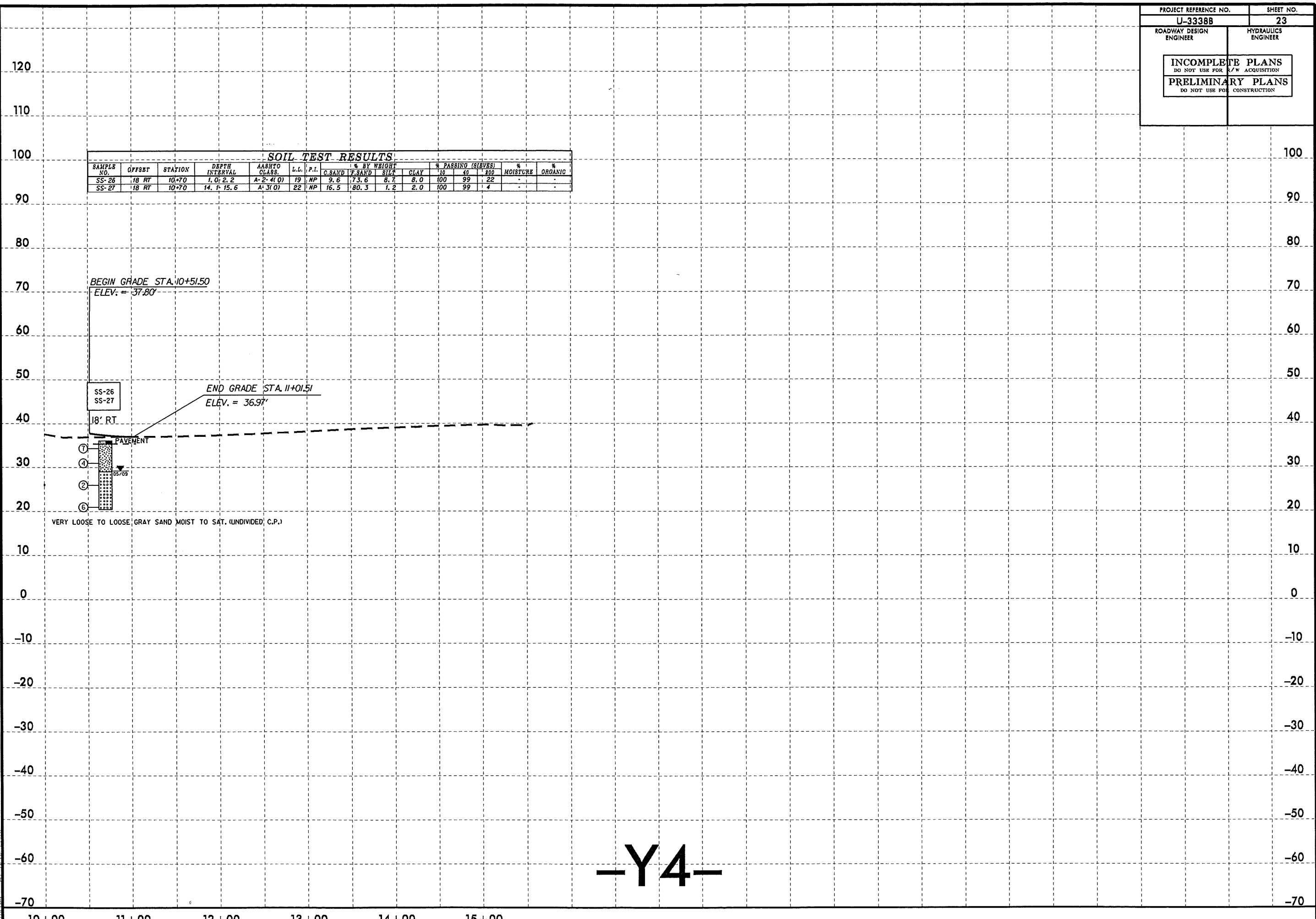


-Y3-

5/14/99  
 I:\SFP-2012 08\37  
 L:\Vero\Greenville\_Investigation\TIP\U3338B\_GEO\_ROWY\CADD\_GEO\TECHN\Plan\U-3338B\_GEO\_ROWY\_Y3\_PFLI.dgn  
 8/16/2012 10:41:41 AM

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>23</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHFO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	#10	#40	#200		
SS-26	18 RT	10+70	1.0' - 2.2'	A-2-4(0)	19	NP	9.6	73.6	8.7	8.0	100	99	22	-	-
SS-27	18 RT	10+70	14.1' - 15.6'	A-3(0)	22	NP	16.5	80.3	1.2	2.0	100	99	4	-	-

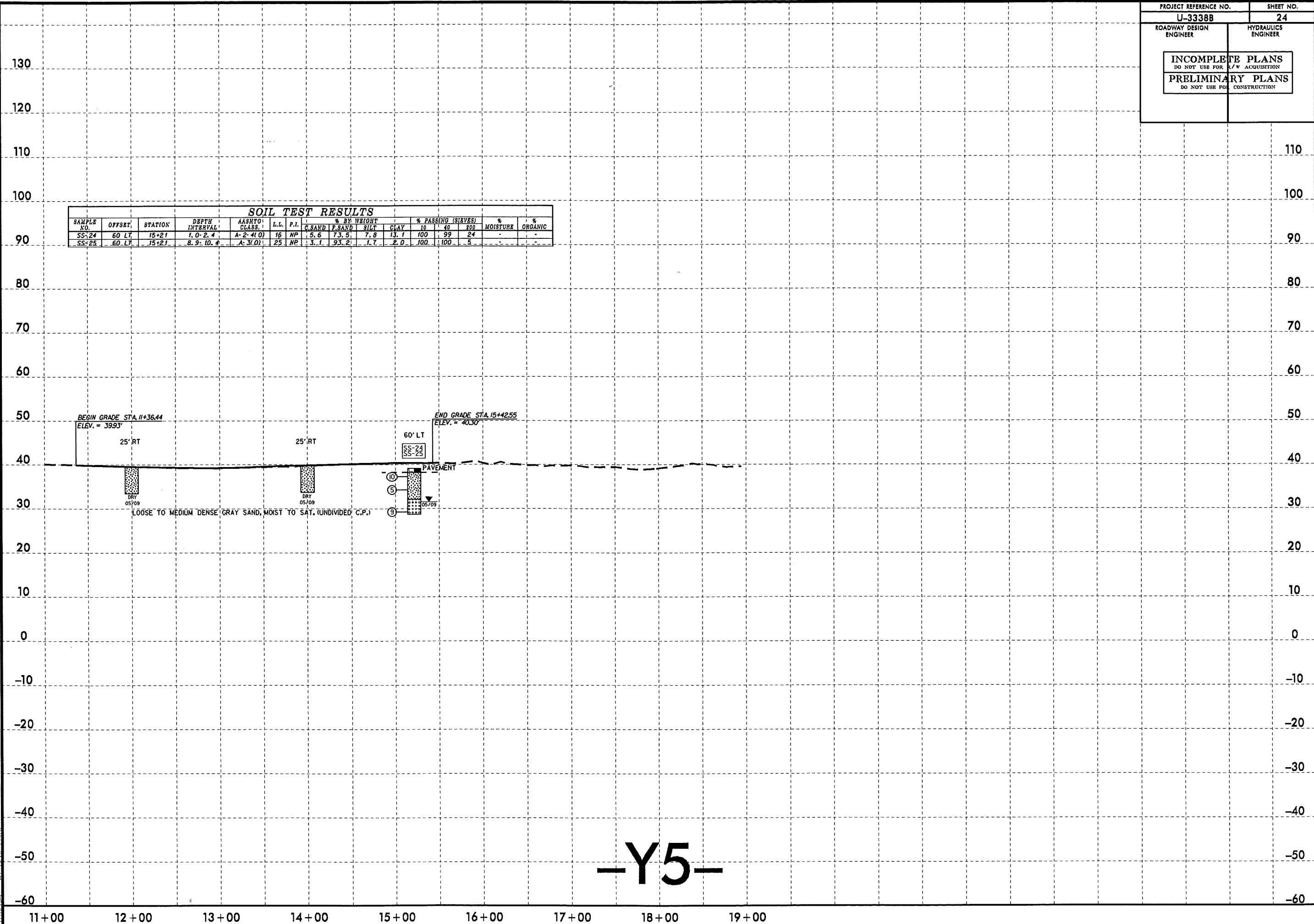


-Y4-

5/14/99  
 I:\3-SEP-2012 08:37  
 L:\Vero\Greenville\_investigation\TIP\U3338B\_GEO\_ROWY\CADD\_GEO\TECH\Plan\U-3338B\_GEO\_ROWY\_Y4\_PFI1.dgn  
 81 PFI25481

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>24</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

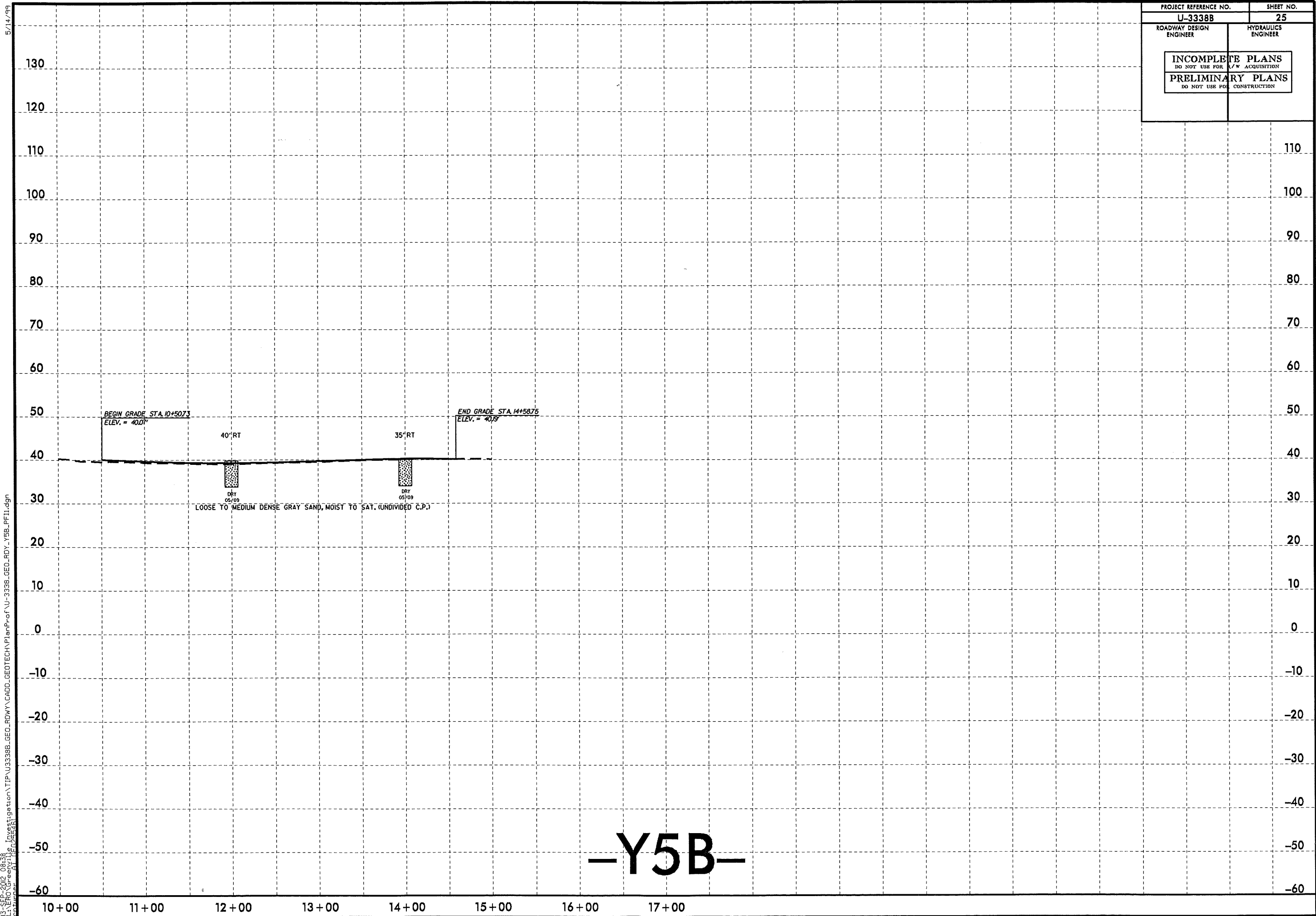
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-24	60 LT	15+21	1.0-2.4	A-2-4(0)	16	NP	5.6	73.5	7.8	13.1	100	99	24	-	-
SS-25	60 LT	15+21	8.9-10.4	A-3(0)	25	NP	3.1	93.2	1.7	2.0	100	100	5	-	-



-Y5-

5/14/99  
 I:\3-SEP-2012 08:38  
 L:\Vero\Kreer\ville\_investigation\TIP\U3338B\_GEO\_ROWY\CADD\_GEO\TECH\Plan\Prof\U-3338B\_GEO\_ROWY\_Y5\_PFI1.dgn  
 11/11/2012 11:11:11 AM

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>25</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

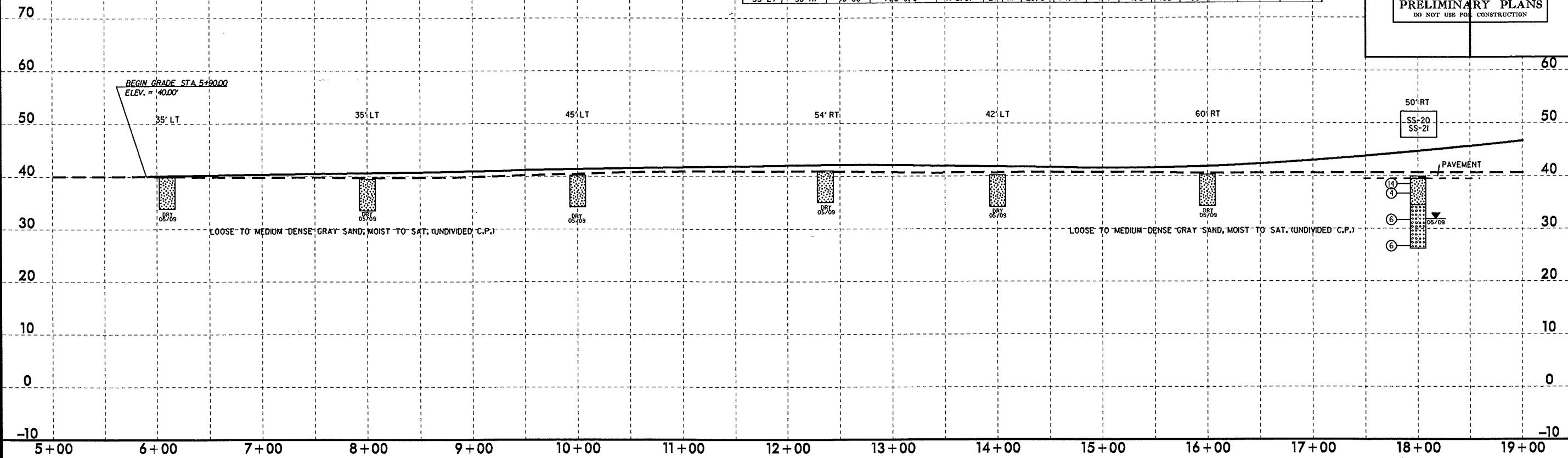


I:\SEP-2012 08:38  
 L:\VERO\Greenville\_Investigation\TIP\U3338B\_GEO\_ROWY\CADD\_GEO\TECH\Plan\U-3338\_GEO\_RDY\_Y5B\_PFI1.dgn  
 AT REF 252481

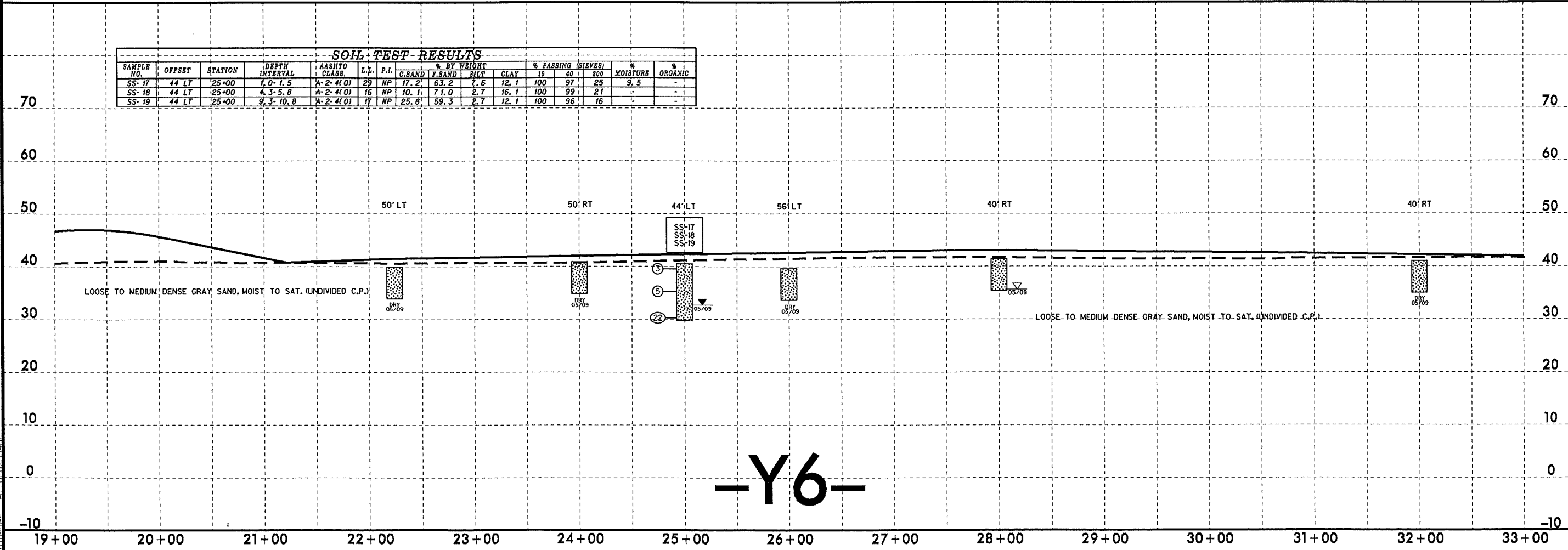
5/28/99

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>26</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-20	50 RT	18+00	1.0-2.0	A-2-4(0)	20	NP	18.5	74.2	3.3	4.0	100	97	11	-	-
SS-21	50 RT	18+00	7.3-8.8	A-3(0)	21	NP	20.5	74.1	1.4	4.0	100	99	7	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-17	44 LT	25+00	1.0-1.5	A-2-4(0)	29	NP	17.2	63.2	7.6	12.1	100	97	25	9.5	-
SS-18	44 LT	25+00	4.3-5.8	A-2-4(0)	16	NP	10.1	71.0	2.7	16.1	100	99	21	-	-
SS-19	44 LT	25+00	9.3-10.8	A-2-4(0)	17	NP	25.8	59.3	2.7	12.1	100	96	16	-	-



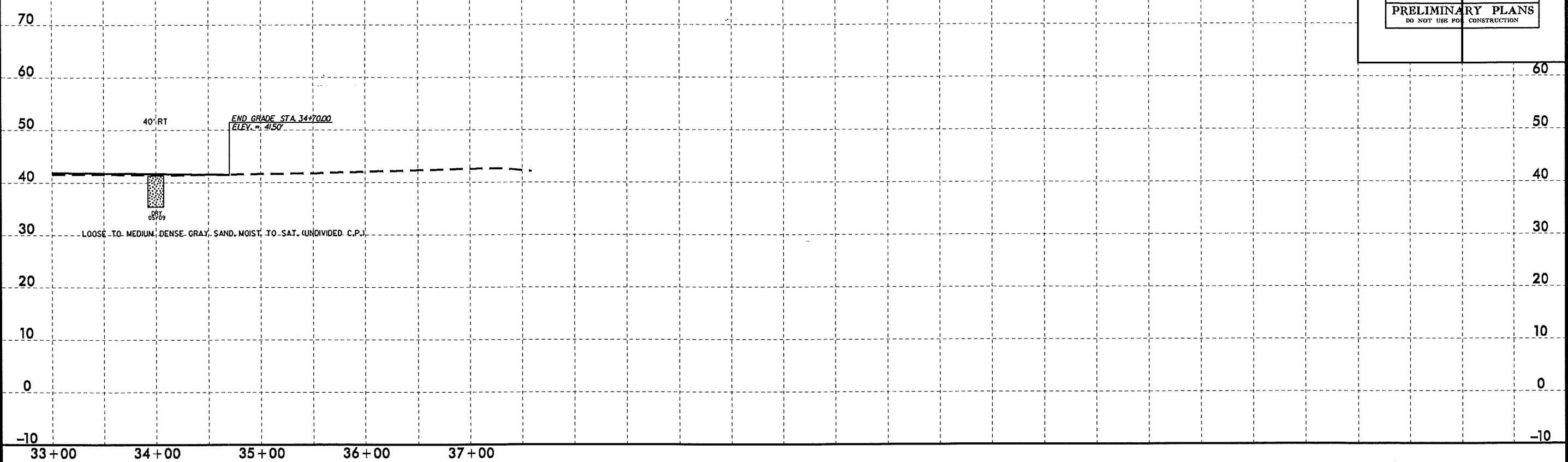
-Y6-

I:\3-SFP-2002\_08339  
 L:\VFO\Greenville\_investigation\TIP\U3338B\_GEO\_RDWY\_CADD\_GEO\RDWY\_CADD\_GEO\RDWY\_CADD\_GEO\U-3338B\_GEO\_RDWY\_Y6\_PFI.3.dgn  
 Date: 5/28/99



5/28/99

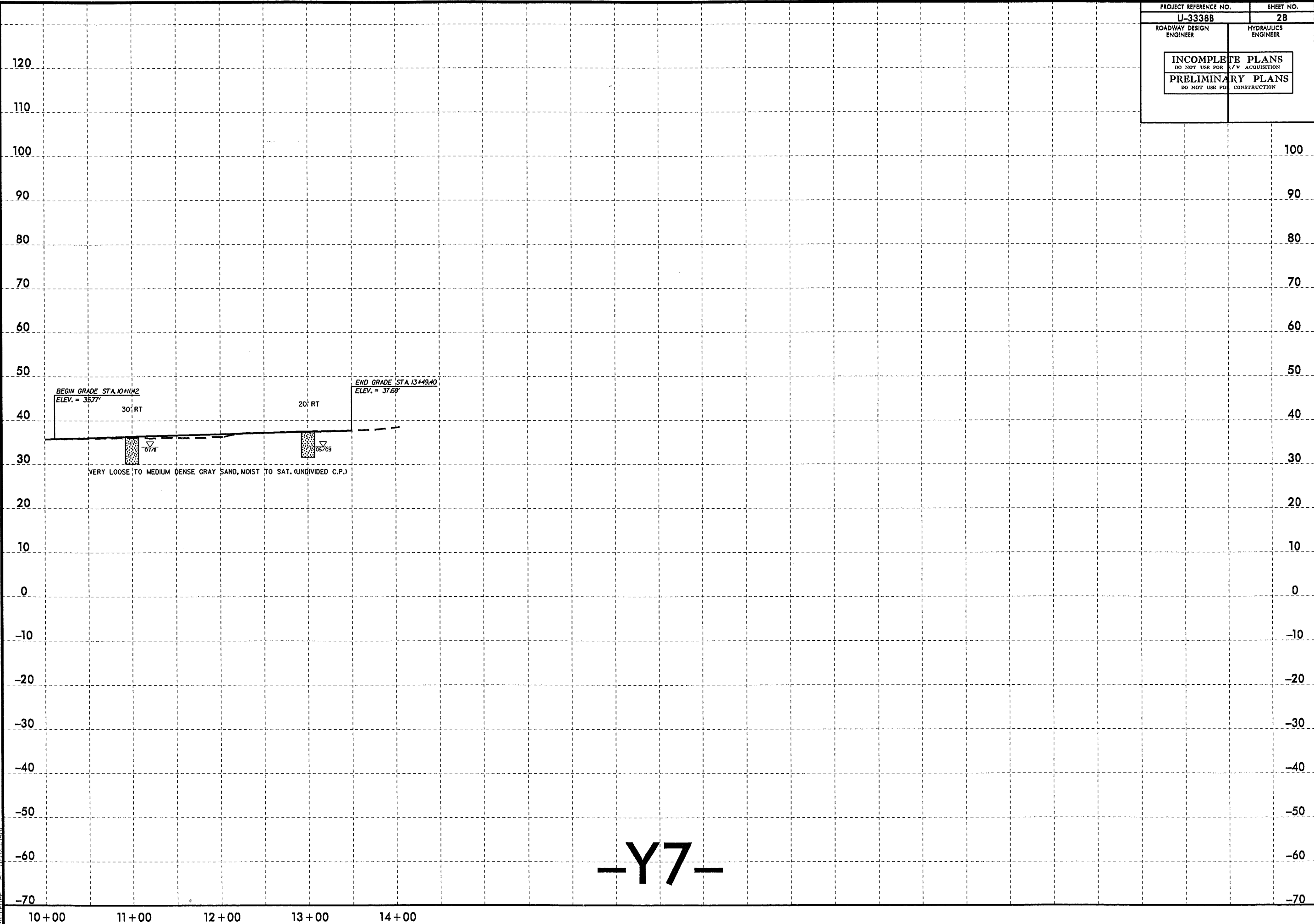
PROJECT REFERENCE NO.	SHEET NO.
U-3338B	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



E:\SEP-2012 08:40 L:\Vero\Green\116\_Investigation\TIP\U3338B.GEO\_RDWY\CADD\_GEO\TECHN\PlanPof\U-3338-GEO\_RDWY\_Y6\_PFL4.dgn

-Y6-

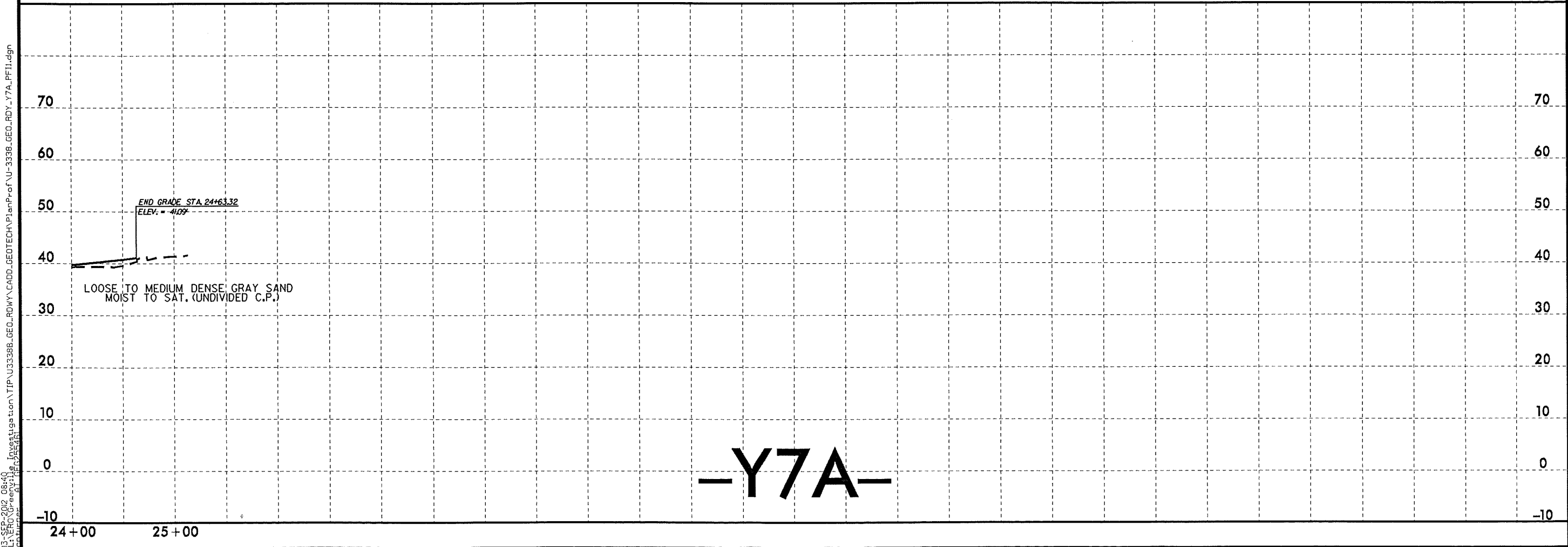
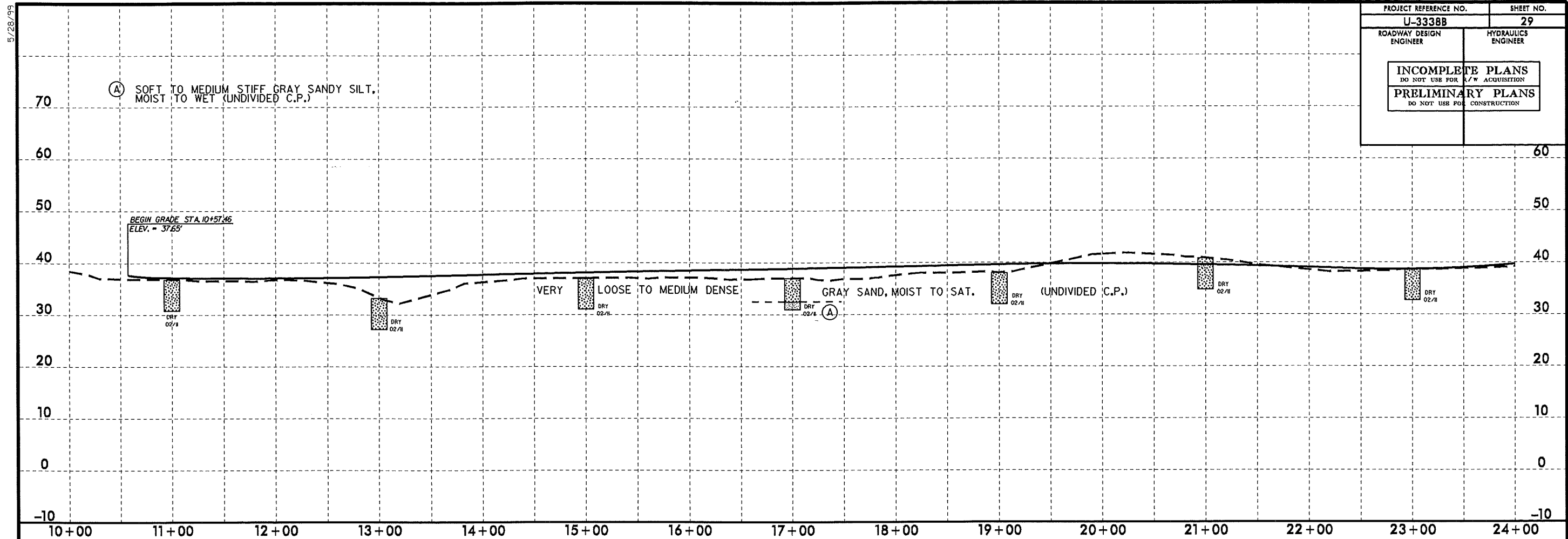
PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>28</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



5/14/99  
 I:\3-SFP-2012\_08\40  
 L:\VFO\Greenville\_Inv\Investigation\TIP\U3338B\BEO\_ROWY\CADD\_GEO\TECHN\Plan\of\U-3338B\_GEO\_ROWY\_Y7\_PFI.dgn  
 6/1/2012 11:54:51 AM

-Y7-

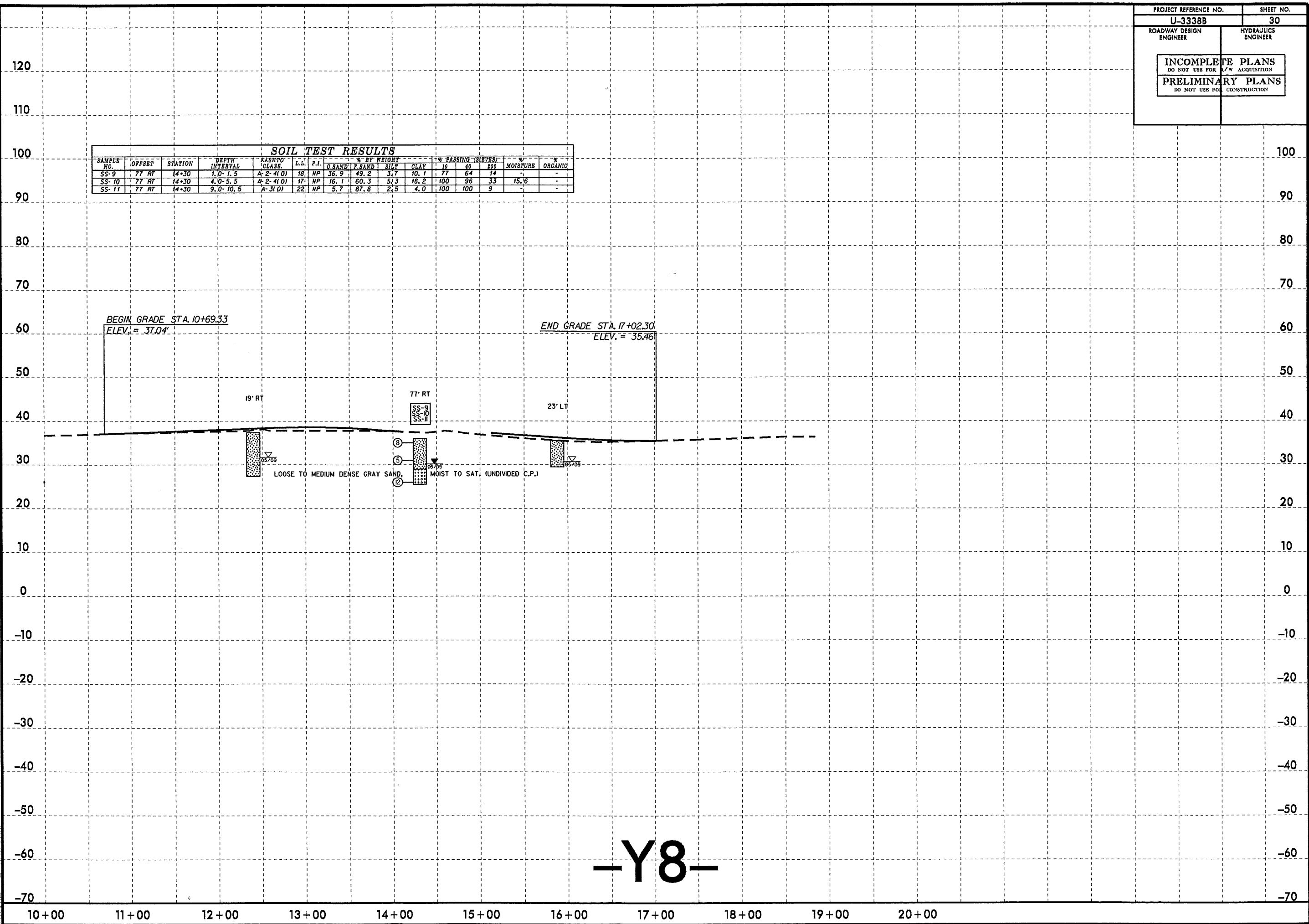
PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>29</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR R/W ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



-Y7A-

5/28/99  
 I:\3-SFP-2012-0840  
 L:\VFO\Greenville\_Investigation\TIP\U3338B.GEO\_ROWY\CADD\_GEO\TECH\PlanPrj\U-3338-GEO\_RDY\_Y7A\_PFI1.dgn  
 13-SEP-2012 08:40  
 L:\VFO\Greenville\_Investigation\TIP\U3338B.GEO\_ROWY\CADD\_GEO\TECH\PlanPrj\U-3338-GEO\_RDY\_Y7A\_PFI1.dgn  
 13-SEP-2012 08:40

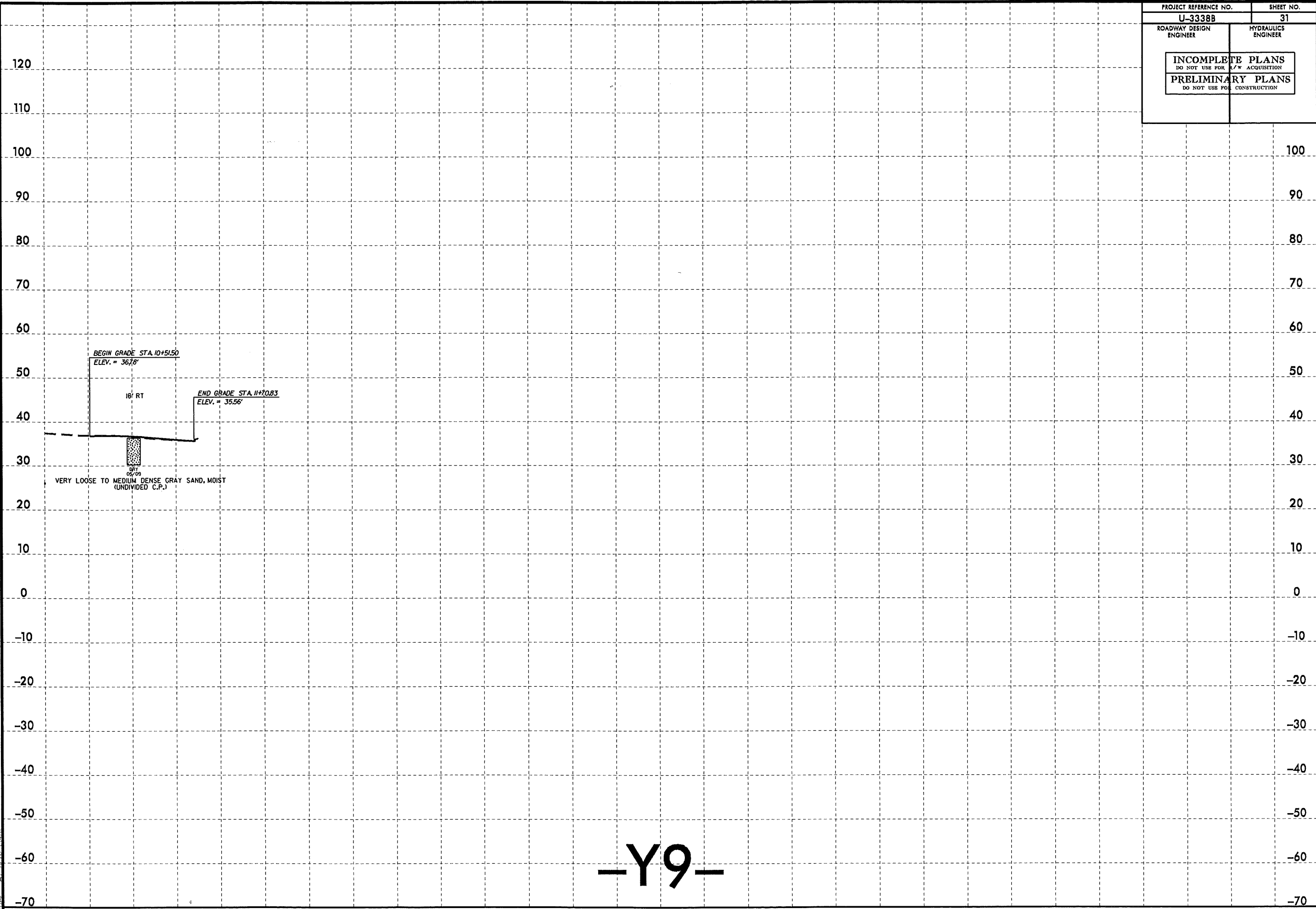
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G. SAND	F. SAND	SILT	CLAY	10	40	100		
SS-9	77 RT	14+30	1.0-1.5	A-2-4(0)	18	HP	36.9	49.2	3.7	10.1	77	64	14	-	-
SS-10	77 RT	14+30	4.0-5.5	A-2-4(0)	17	HP	16.1	60.3	5.3	18.2	100	96	33	15.6	-
SS-11	77 RT	14+30	9.0-10.5	A-3(0)	22	HP	5.7	87.8	2.5	4.0	100	100	9	-	-



-Y8-

5/14/99  
 I:\3-SEP-2012 08:40  
 L:\VERO\Greenville\_Investigation\TIP\U3338B\_GEO\_RDWY\CADD\_GEO\TECH\Plan\U-3338B\_GEO\_RDWY\_Y8\_PFI1.dgn  
 Author: A1 PFI25481

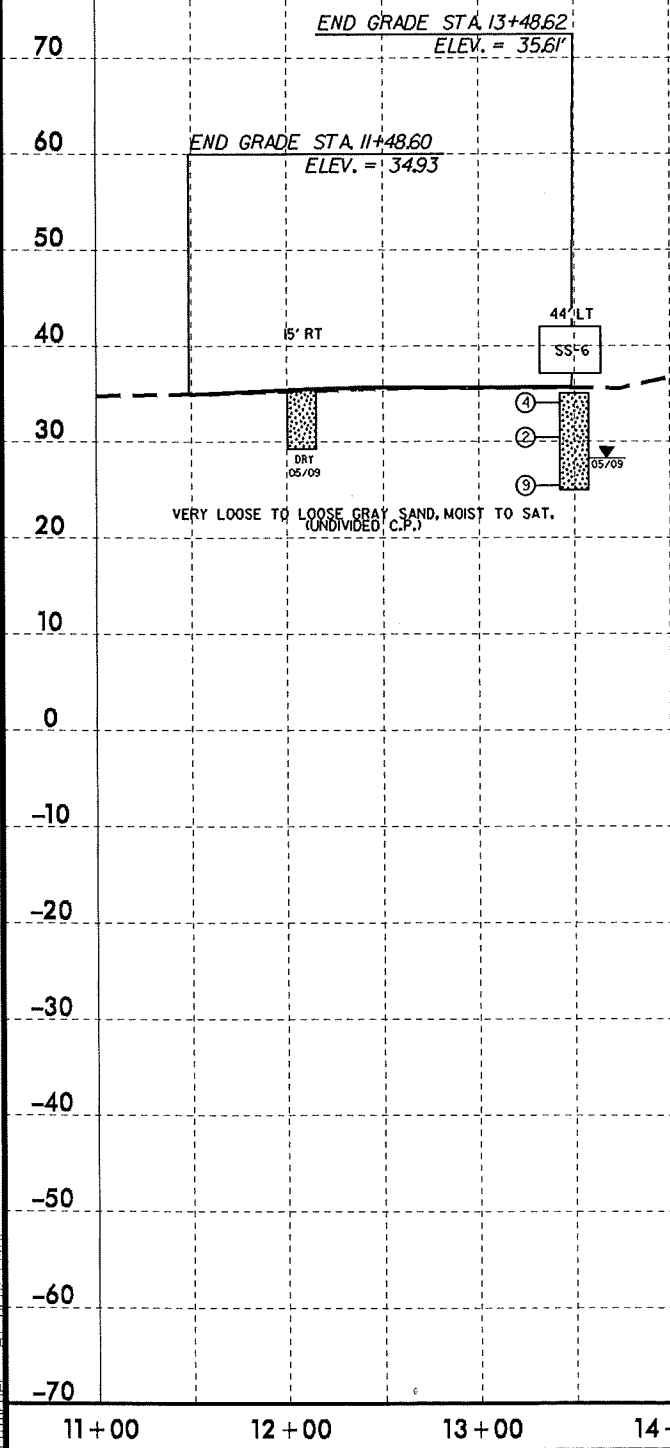
PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>31</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



5/14/99  
 I:\3-SRP-2012\_08-47  
 L:\VFO\Greenville\_Investigation\TIP\U3338B.GEO.RDWAY.CADD.GEOTECH\PlanPr\of\U-3338B.GEO.RDY\_Y9\_PFI1.dgn  
 31 (12/25/24)

-Y9-

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	60		
SS-6	44 LT	13+50	1.0-1.5	A-2-4(0)	16	NP	22.6	50.5	10.8	16.1	100	93	34	-



-Y10-

5/14/99  
 I:\3-SEP-2012 08:46  
 L:\VERO\Green\11g\_investigation\TIP\U3338B.GEO\_ROWY\_CADD\_GEO\TECH\PlanPr\of\U-3338B.GEO\_ROWY\_Y10\_FF11.dgn  
 31 (R255245)

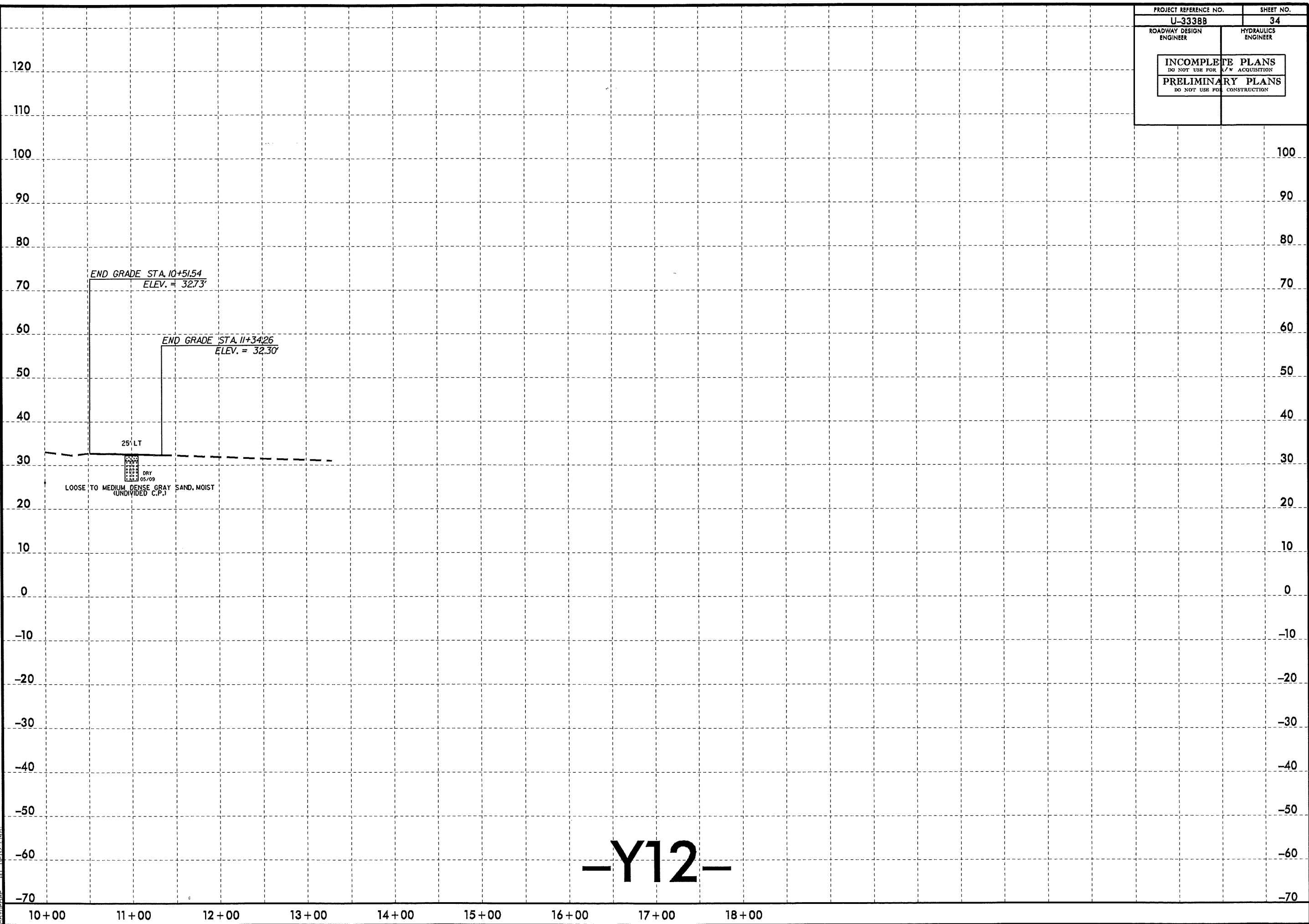
PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>33</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



5/14/99  
 13-SEP-2012 08:46  
 L:\Vero\Greenville\_Investigation\TIP\U3338B\_GEO\_RDWY\_CADD\_GEDTECH\PlanPr of \U-3338B\_GEO\_RDWY\_Y11\_PFI.dgn  
 3338B.dwg  
 AT REF 25421

-Y11-

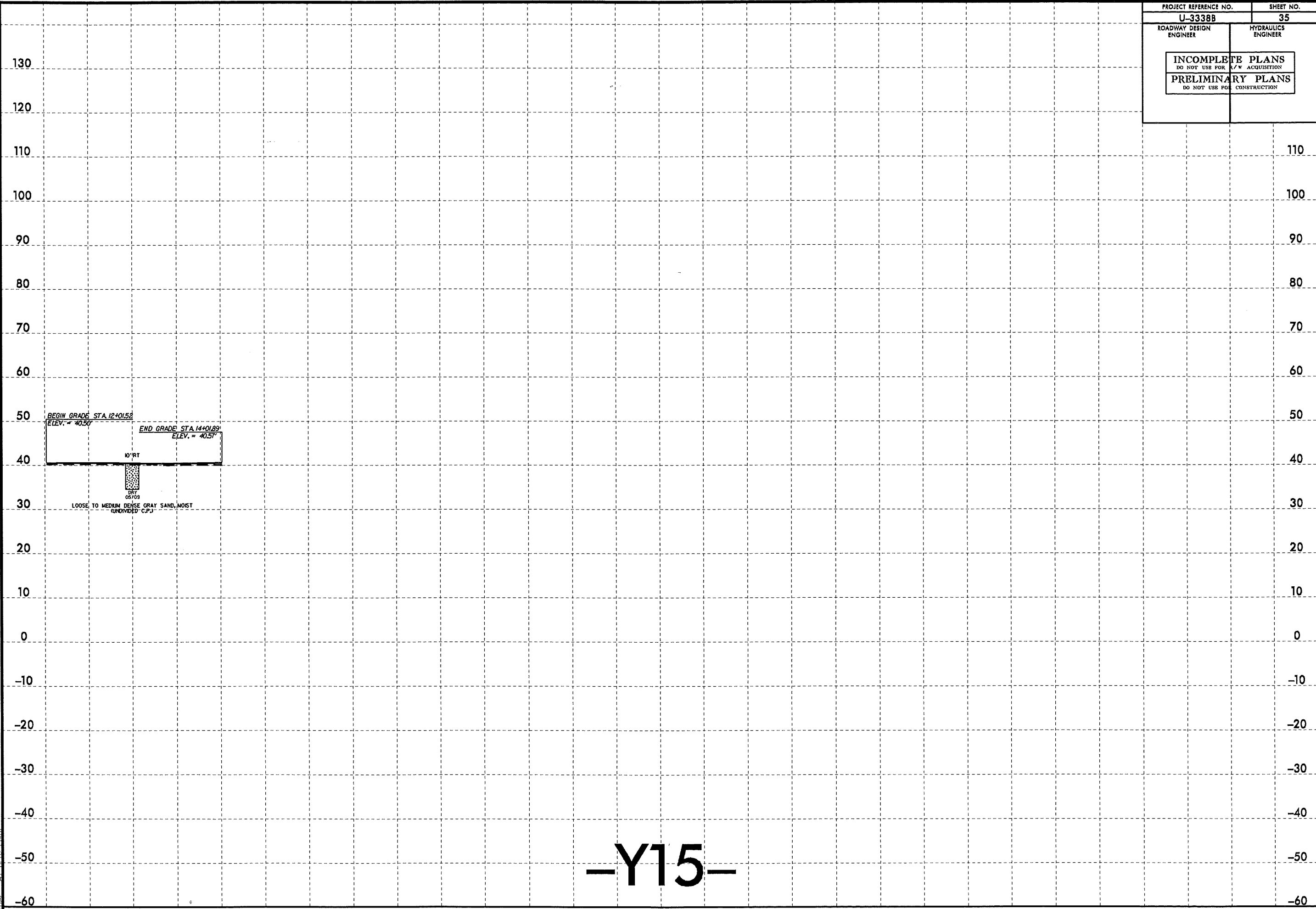
PROJECT REFERENCE NO. U-3338B	SHEET NO. 34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



-Y12-



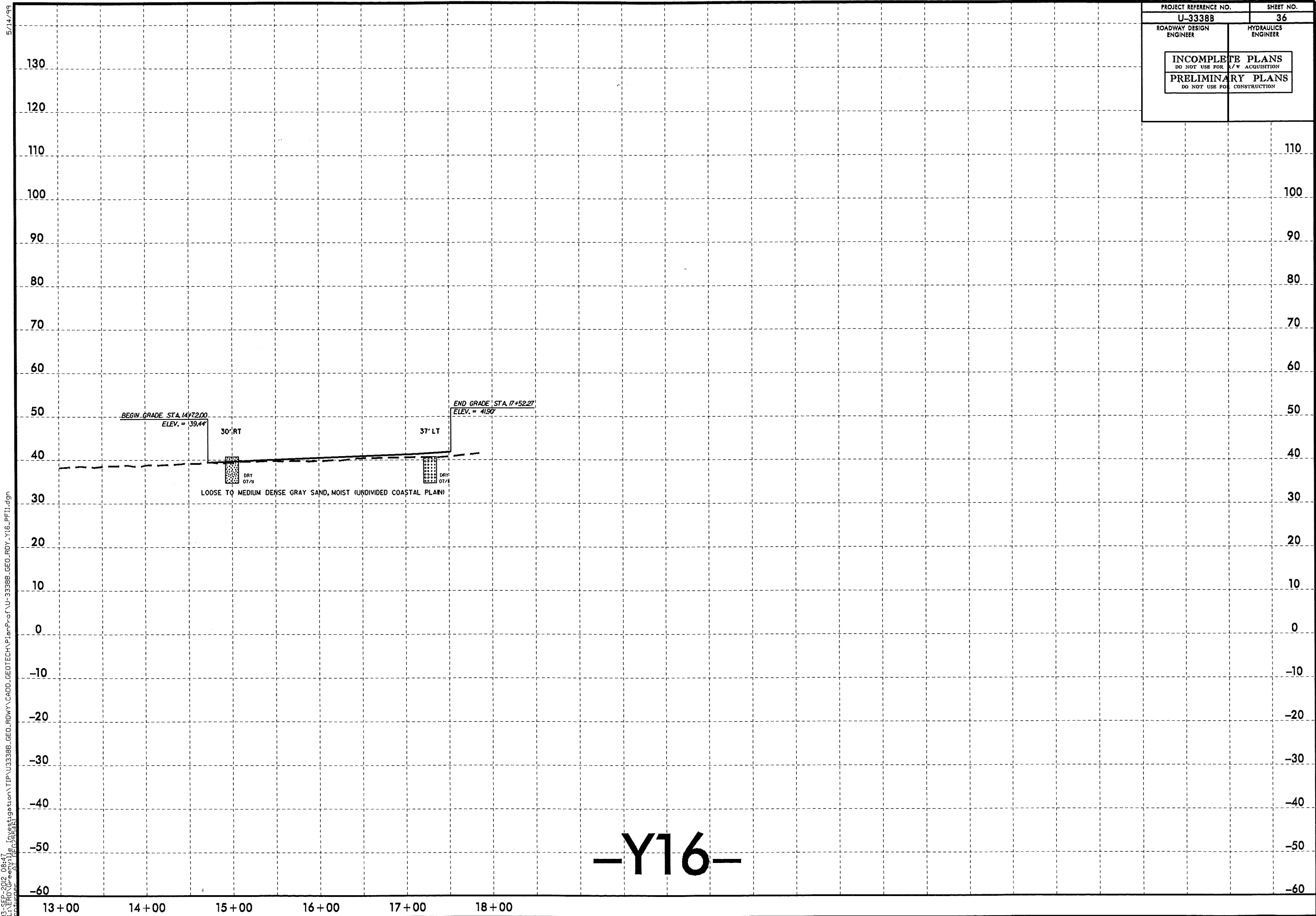
PROJECT REFERENCE NO.	SHEET NO.
U-3338B	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



5/14/99  
 I:\SFP-202 0847  
 L:\Vero\Greenville\_investigation\TIP\U3338B.GEO.RDWAY.CADD.GEOTECHNPlanP\of\U-3338B.GEO.RDY\_Y15\_PFI.dgn  
 61 05/25/08

-Y15-

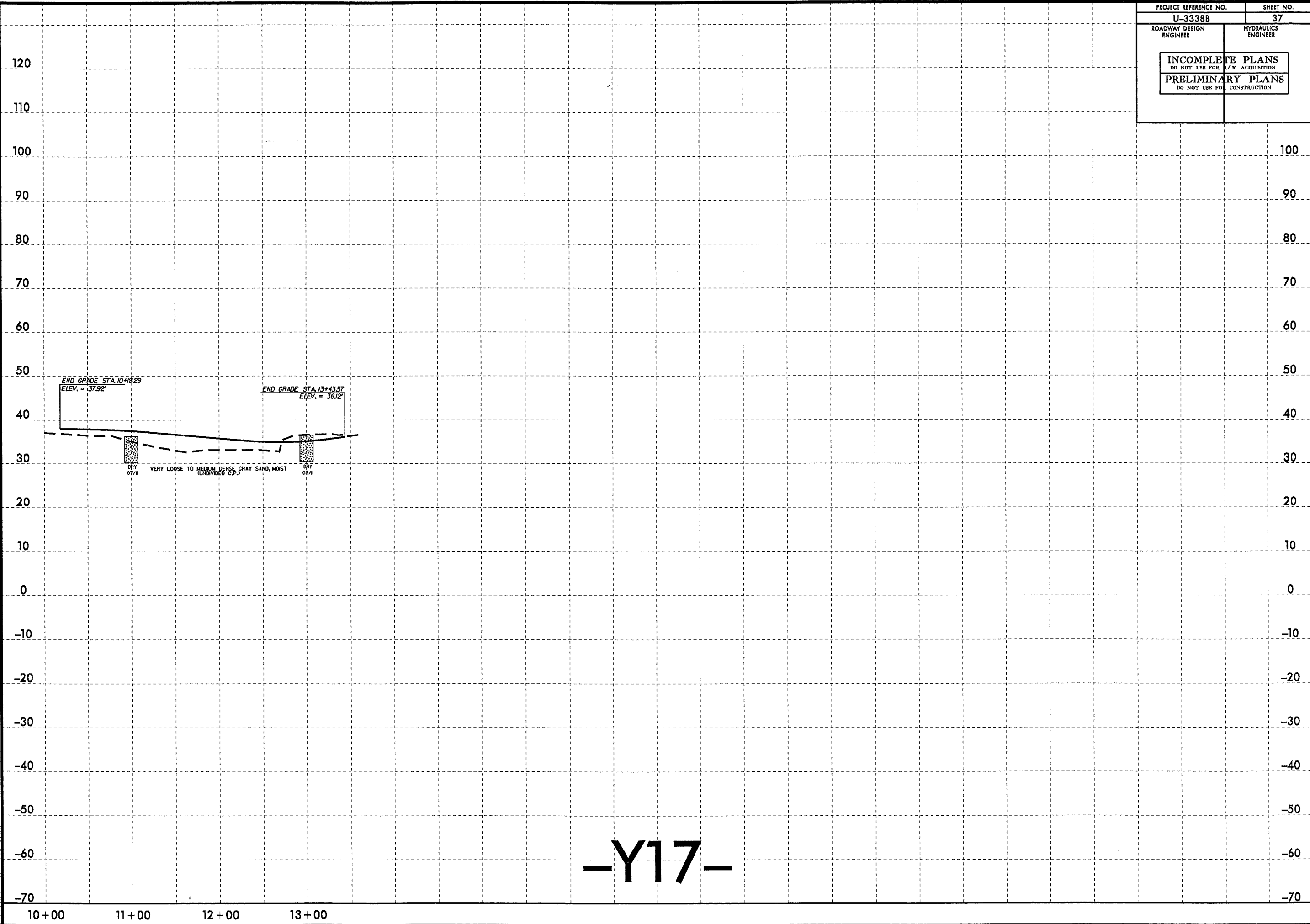
PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>36</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



**-Y16-**

3-SEP-2012 08:47  
 L:\ENR\Greenville\_Investigation\TIP\U3338B\_GEO\_ROW\Y\_CADD\_GEO\TECH\Plan\U-3338B\_GEO\_ROW\_Y16\_PFI1.dgn  
 Author: AT-REB5481

PROJECT REFERENCE NO. <b>U-3338B</b>	SHEET NO. <b>37</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



5/14/99  
 I:\3-SEP-2012 08:47  
 L:\Vero\Greenville\_Investigation\TIP\U3338B\_GEO\_ROWY\CADD\_GEO\TECH\Plan\Prof\U-3338B\_GEO\_RDY\_Y17\_PFI1.dgn  
 37

-Y17-

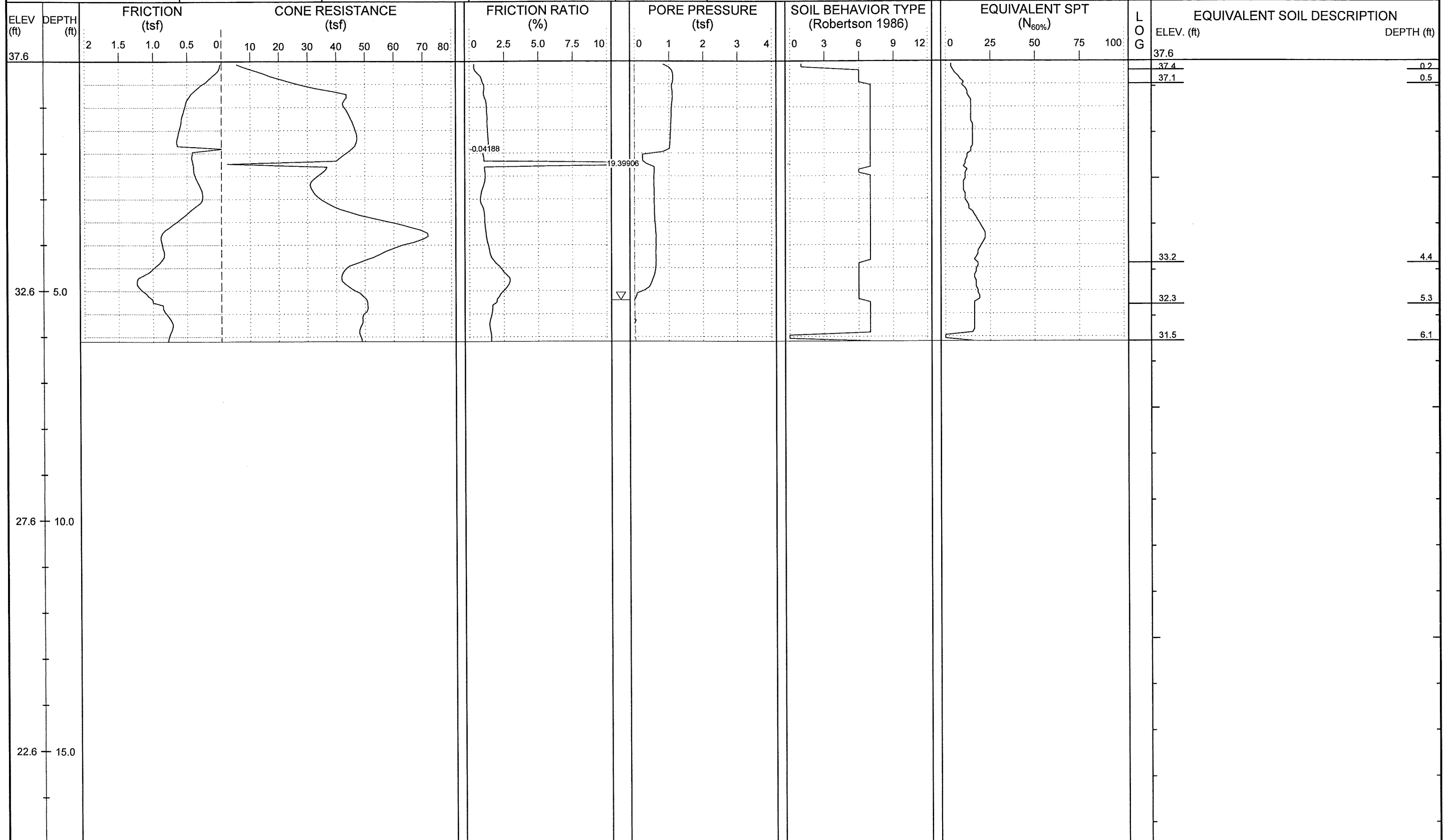


**NCDOT GEOTECHNICAL ENGINEERING UNIT**



SHEET NO.: 1  
PROJ. NO.: 34932.1.1  
TIP NO.: U-3338B  
COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. 5.2	DRILL METHOD: Direct Push
BORING NO.: L-12	STATION: 12+00	OFFSET: 40ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 37.6 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 176,831	EASTING: 2,336,350	START DATE: 05/13/09	CONE ID: DSA0866
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					COMP. DATE: 05/13/09
					SURFACE WATER DEPTH: N/A

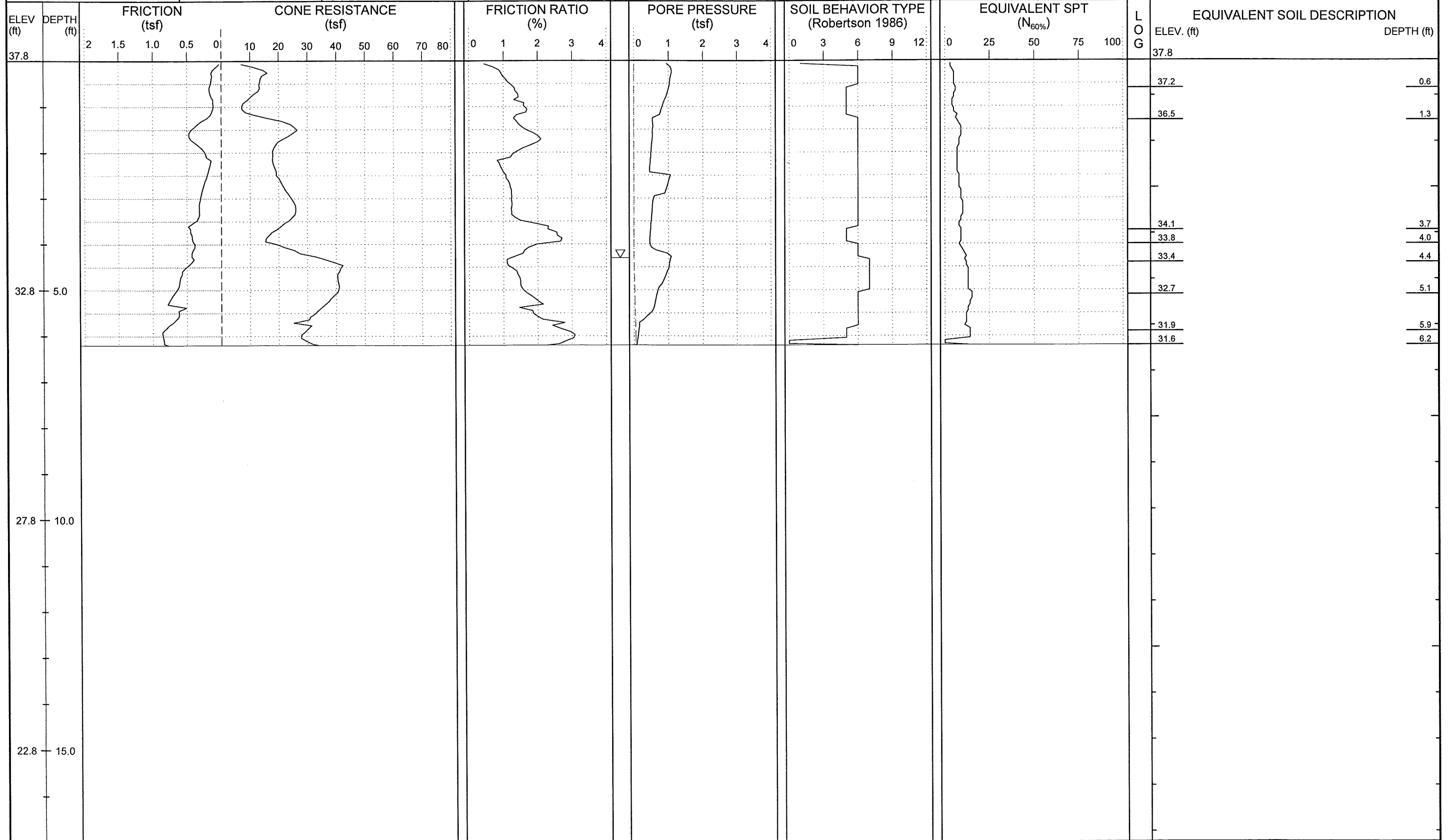




# NCDOT GEOTECHNICAL ENGINEERING UNIT

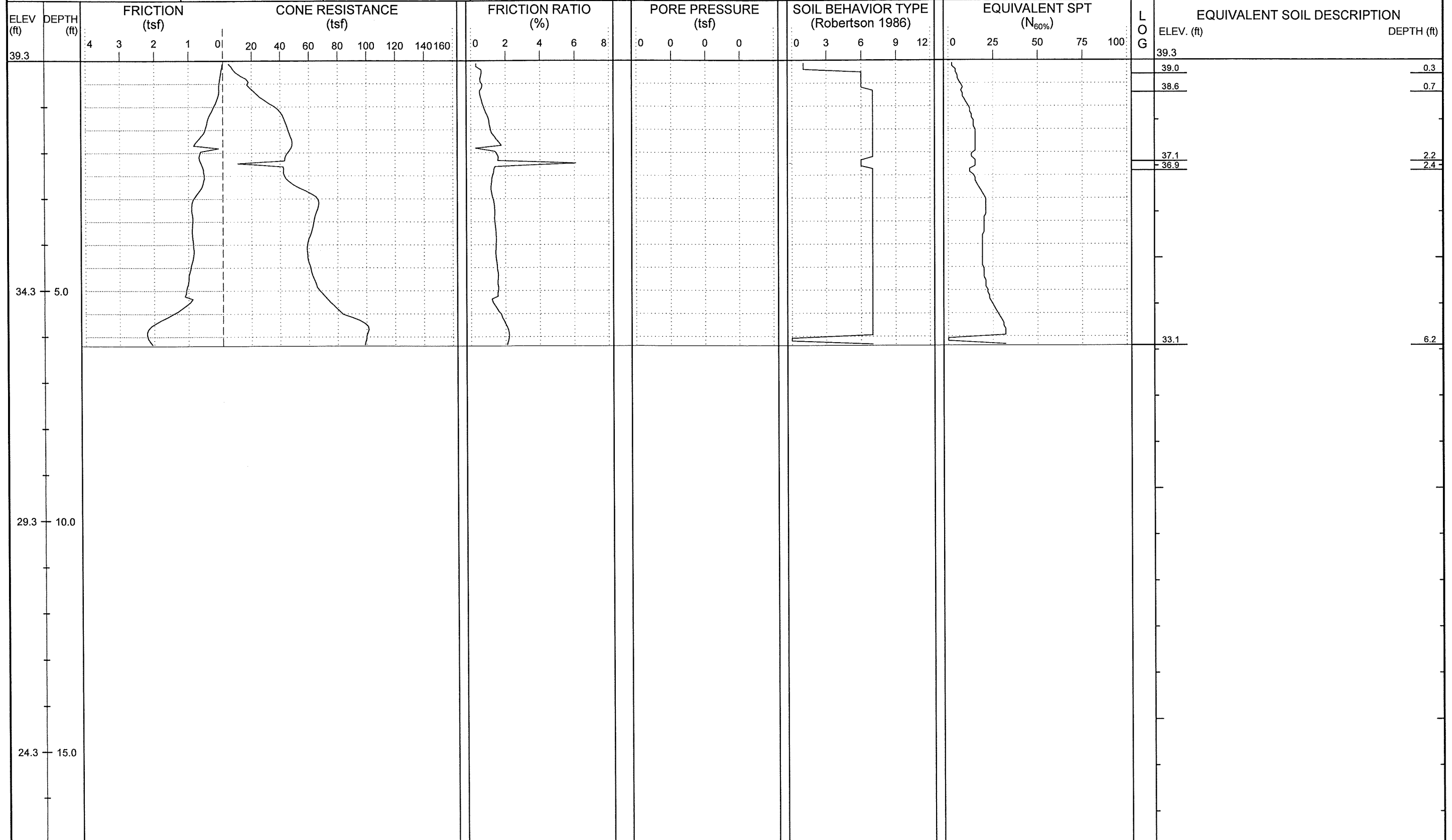
SHEET NO.:	2
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 4.3, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-14	STATION: 13+47	OFFSET: 36ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 37.8 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 176,990	EASTING: 2,336,394	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-16	STATION: 16+05	OFFSET: 41ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 39.3 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 177,244	EASTING: 2,336,344	START DATE: 05/13/09	CONE ID: DSA0866
				24 HR. N/A	COMP. DATE: 05/13/09
				DRILLER: Donald Coogan	
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	

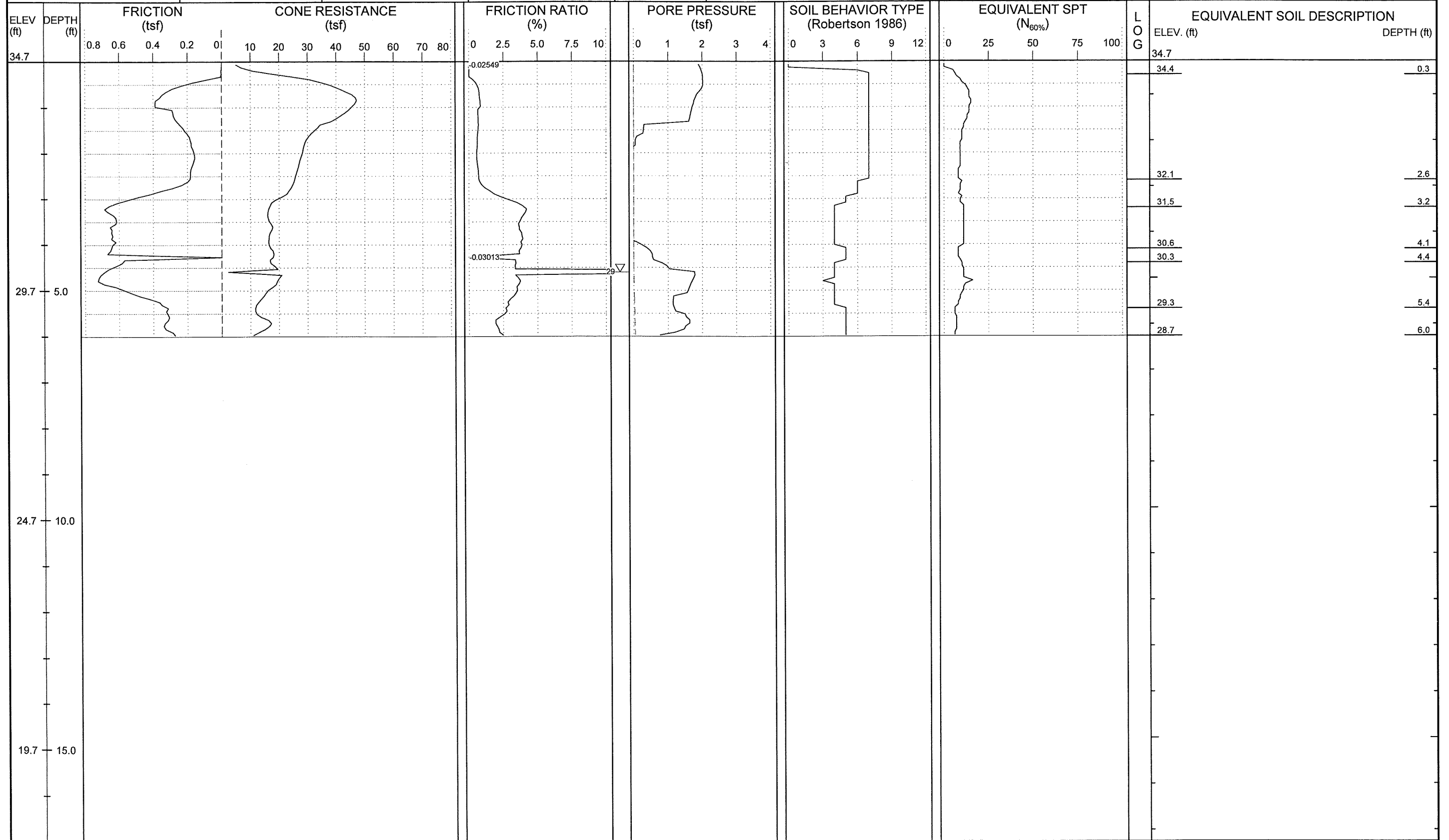




# NCDOT GEOTECHNICAL ENGINEERING UNIT

	SHEET NO.: 4
	PROJ. NO.: 34932.1.1
	TIP NO.: U-3338B
	COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 4.6, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-18	STATION: 17+67	OFFSET: 80ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 34.7 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 177,376	EASTING: 2,336,191	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

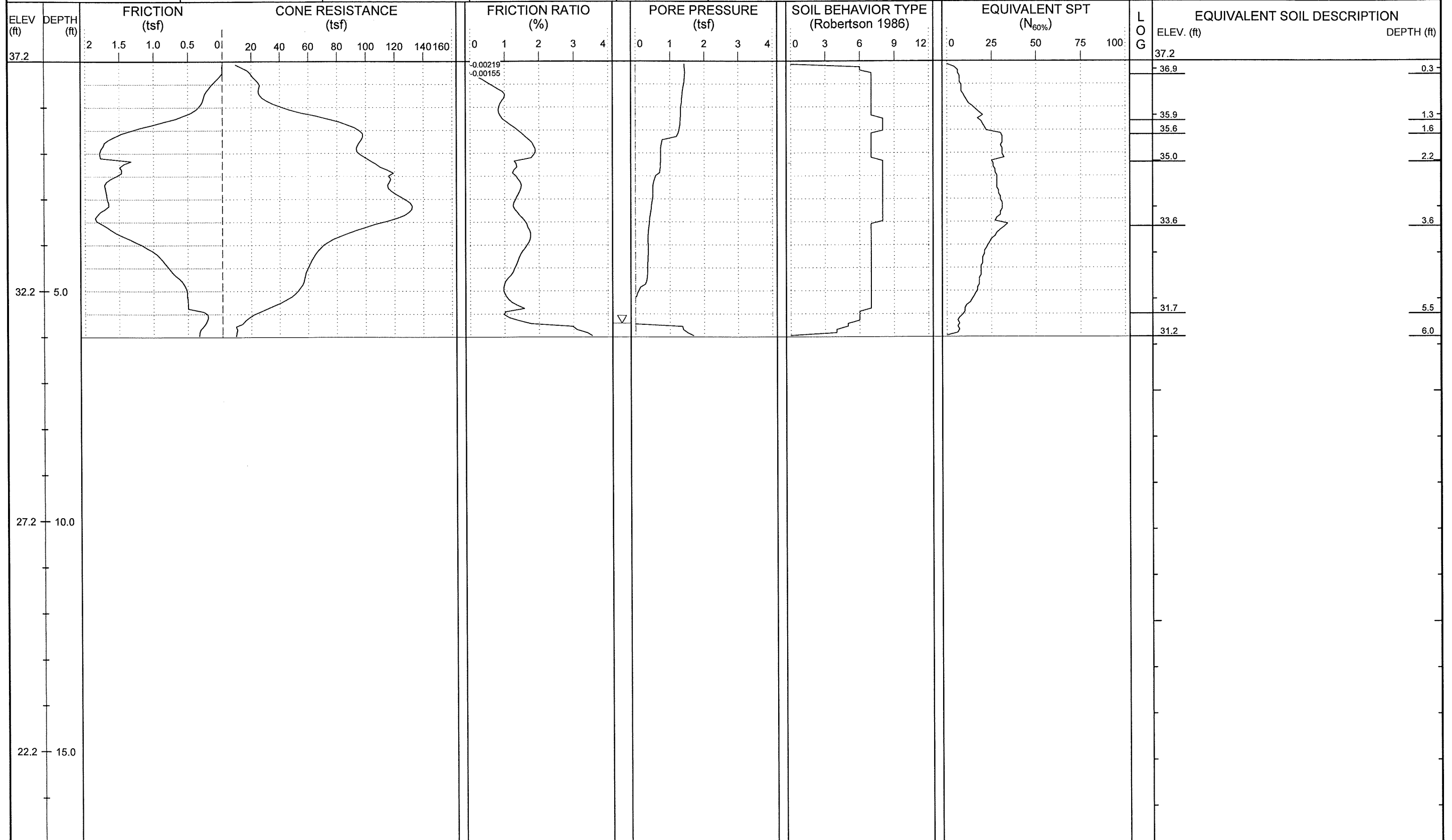




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

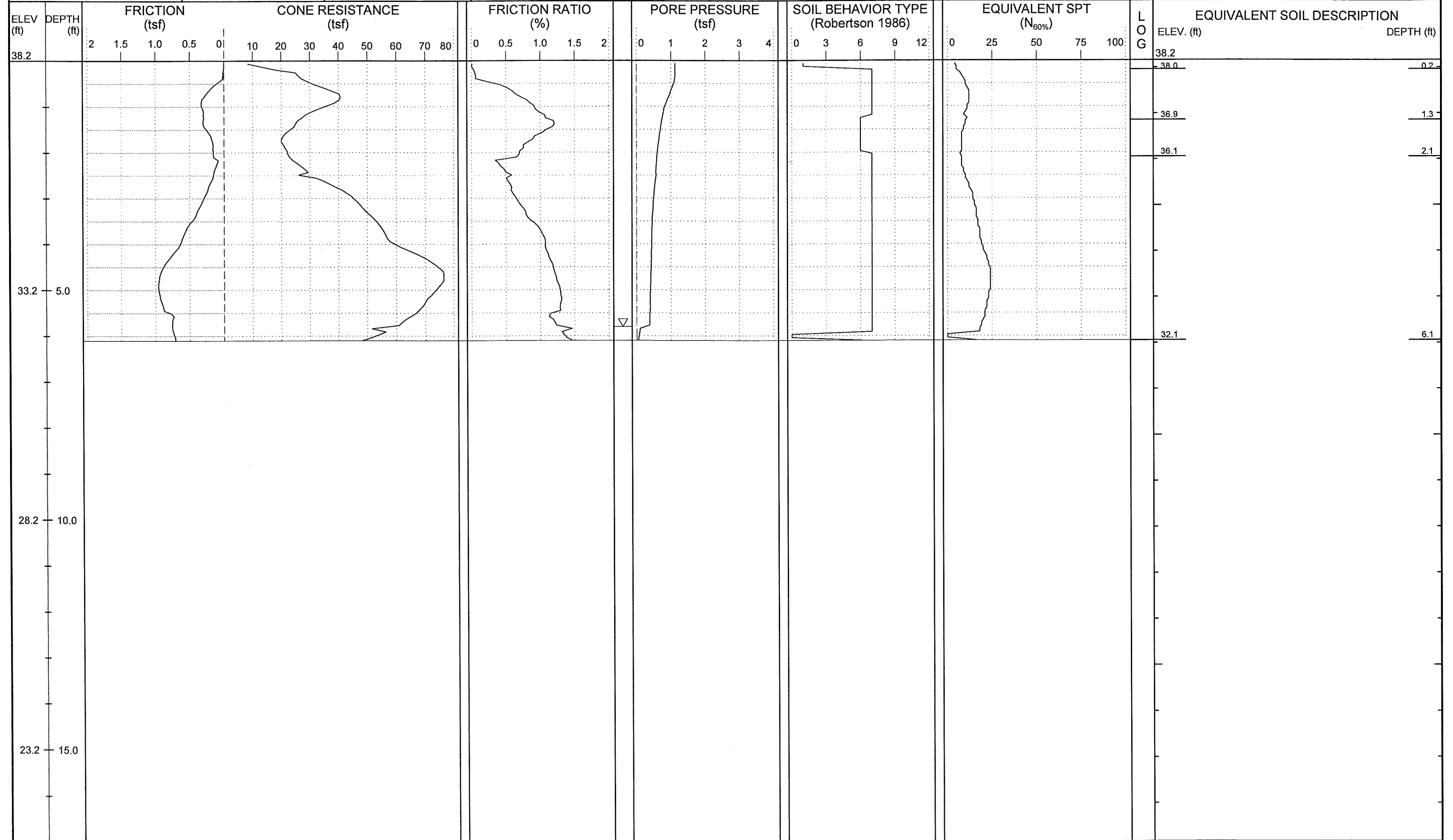
ENGLISH  
 SHEET NO.: 5  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-22	STATION: 22+00	OFFSET: 60ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 37.2 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 177,804	EASTING: 2,336,119	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				DRILL METHOD: Direct Push	DRILLER: Donald Coogan
BORING NO.: L-24	STATION: 23+54	OFFSET: 42ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	TECHNICIAN: M.A.D.
COLLAR ELEV.: 38.2 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 177,976	EASTING: 2,336,187	START DATE: 05/13/09	SURFACE WATER DEPTH: N/A
		GROUND WTR (ft)		CONE TYPE: Piezocone	
		0 HR. 5.8		CONE ID: DSA0866	
		24 HR. N/A		COMP. DATE: 05/13/09	

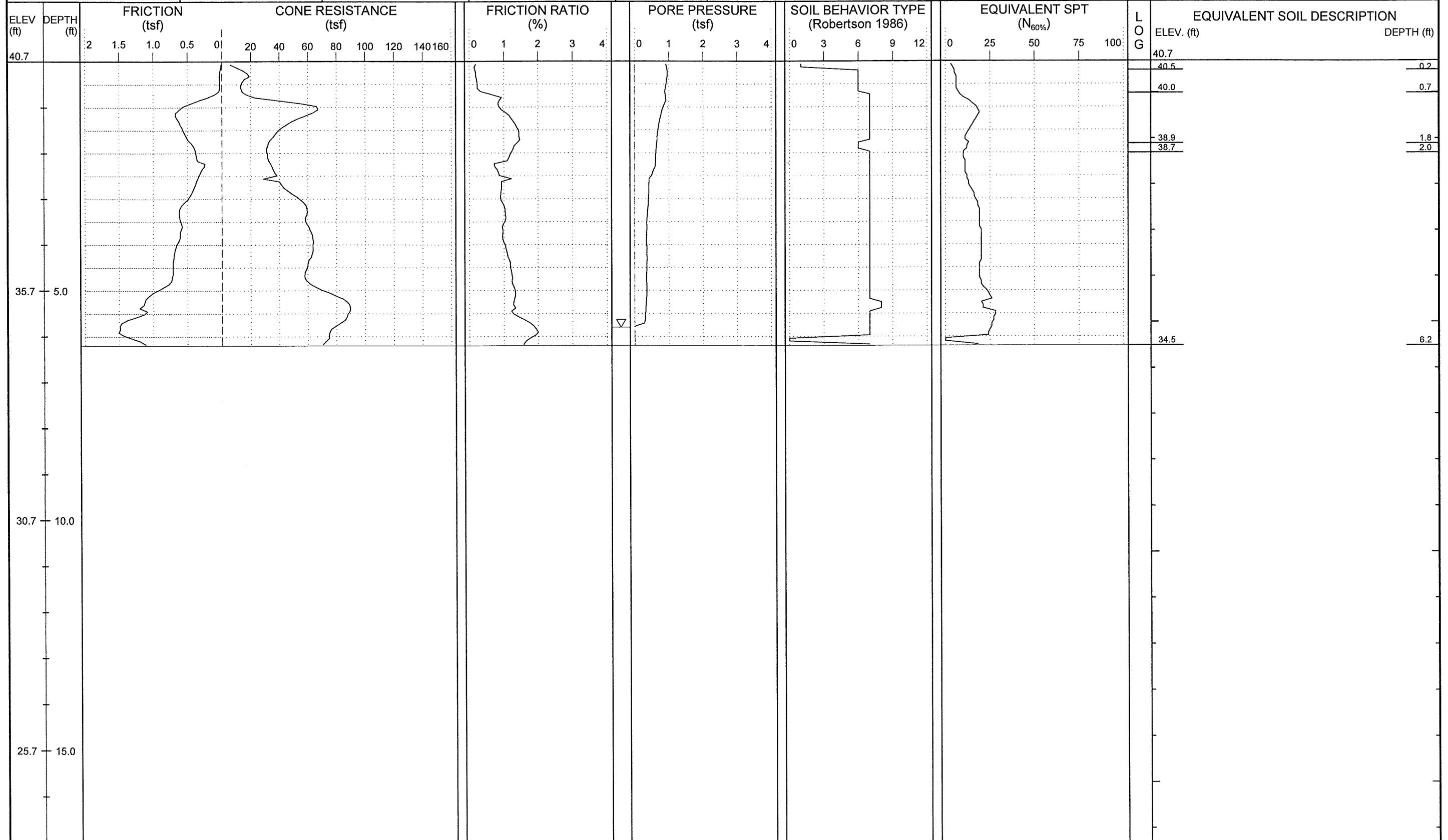




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

	SHEET NO.:	7
	PROJ. NO.:	34932.1.1
	TIP NO.:	U-3338B
	COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				DRILL METHOD: Direct Push	DRILLER: Donald Coogan
BORING NO.: L-26	STATION: 26+14	OFFSET: 28ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	TECHNICIAN: M.A.D.
COLLAR ELEV.: 40.7 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 178,227	EASTING: 2,336,118	START DATE: 05/13/09	SURFACE WATER DEPTH: N/A



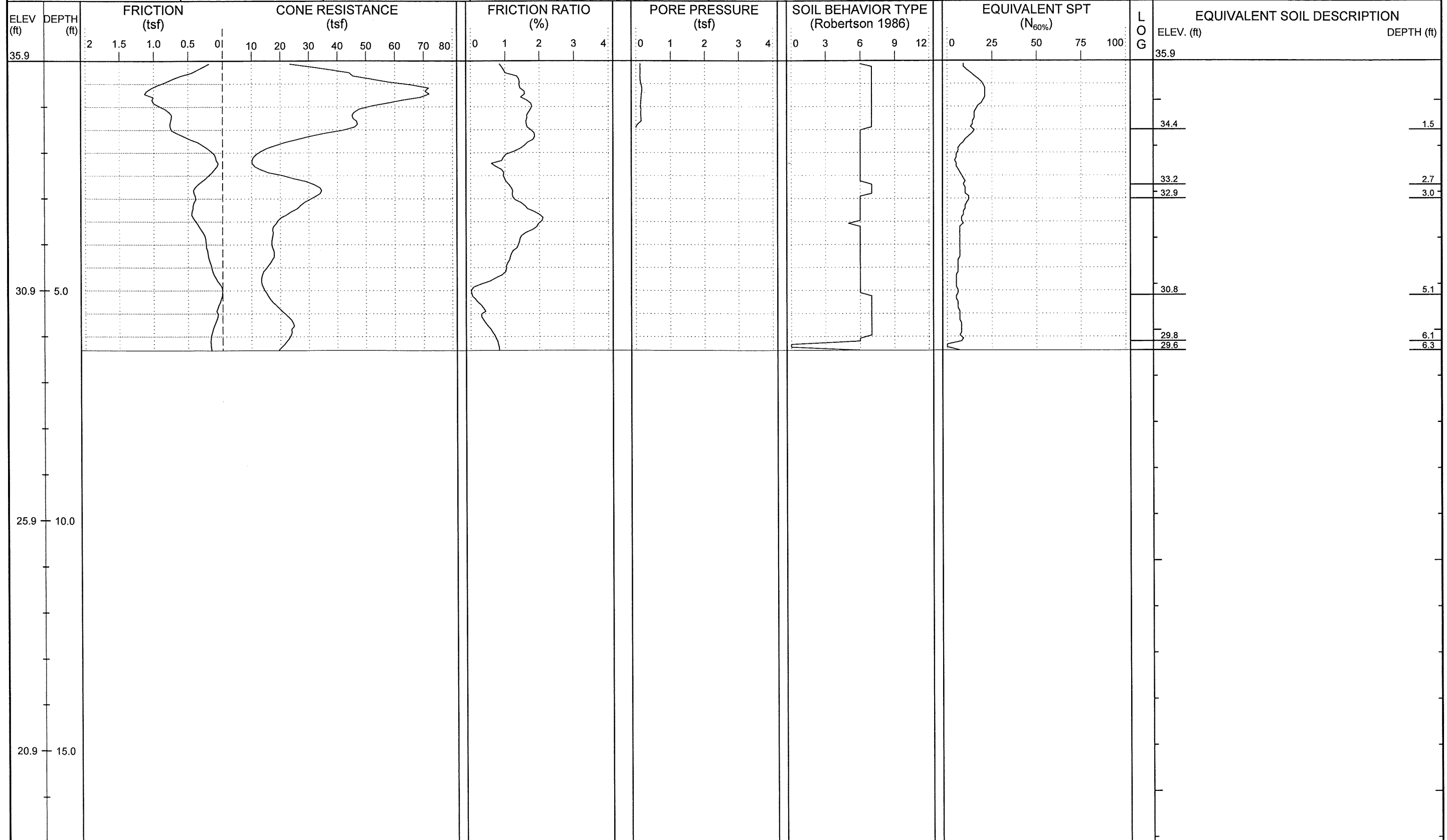




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH  
 SHEET NO.: 9  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-32	STATION: 31+83	OFFSET: 30ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 35.9 ft	TOTAL DEPTH: 6.3 ft	NORTHING: 178,771	EASTING: 2,335,940	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



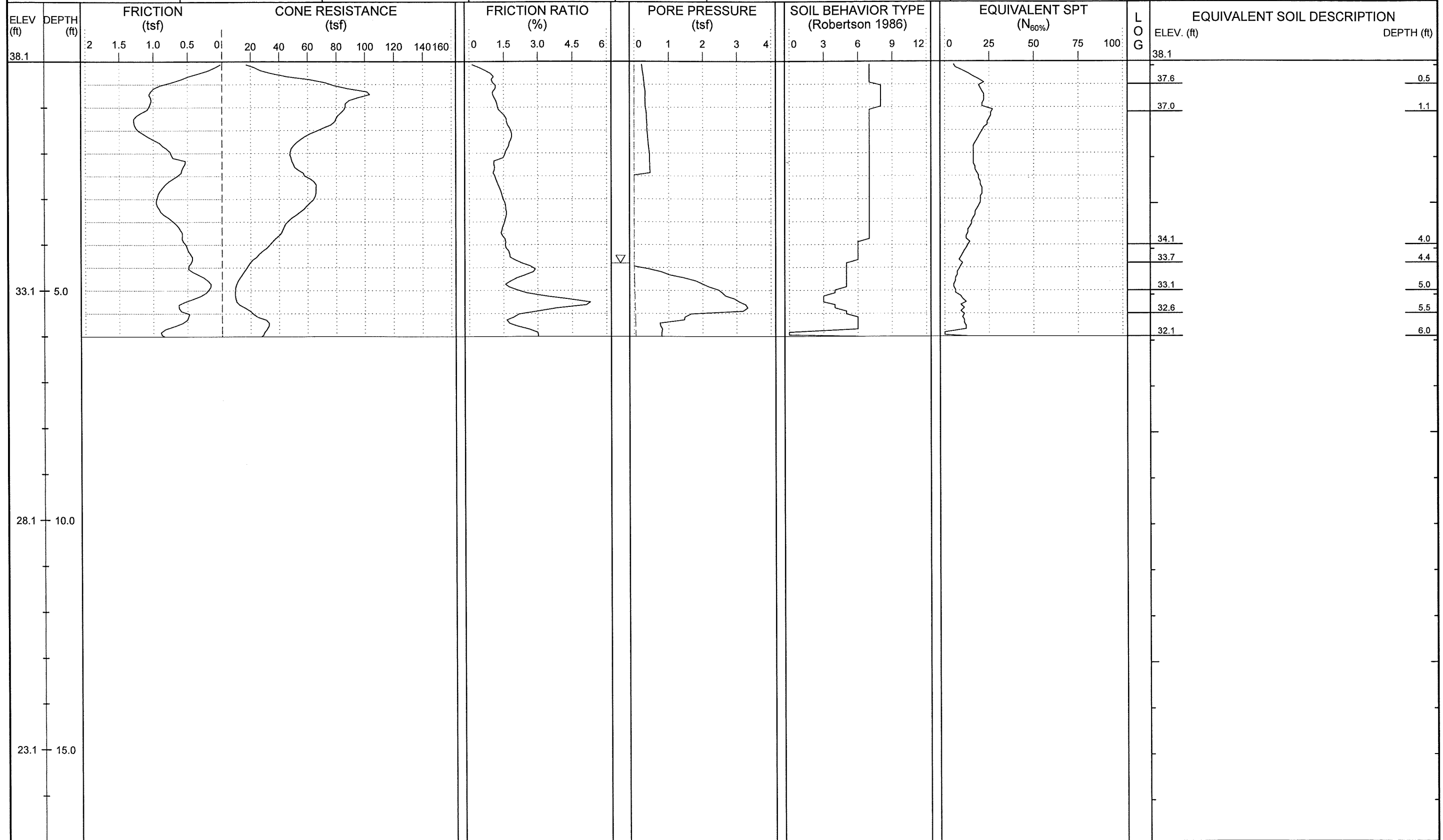


**NCDOT GEOTECHNICAL ENGINEERING UNIT**



SHEET NO.: 10  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. 4.4	DRILL METHOD: Direct Push
BORING NO.: L-34	STATION: 33+94	OFFSET: 49ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 38.1 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 178,994	EASTING: 2,335,974	START DATE: 05/12/09	CONE ID: DSA0866
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					COMP. DATE: 05/12/09
					SURFACE WATER DEPTH: N/A



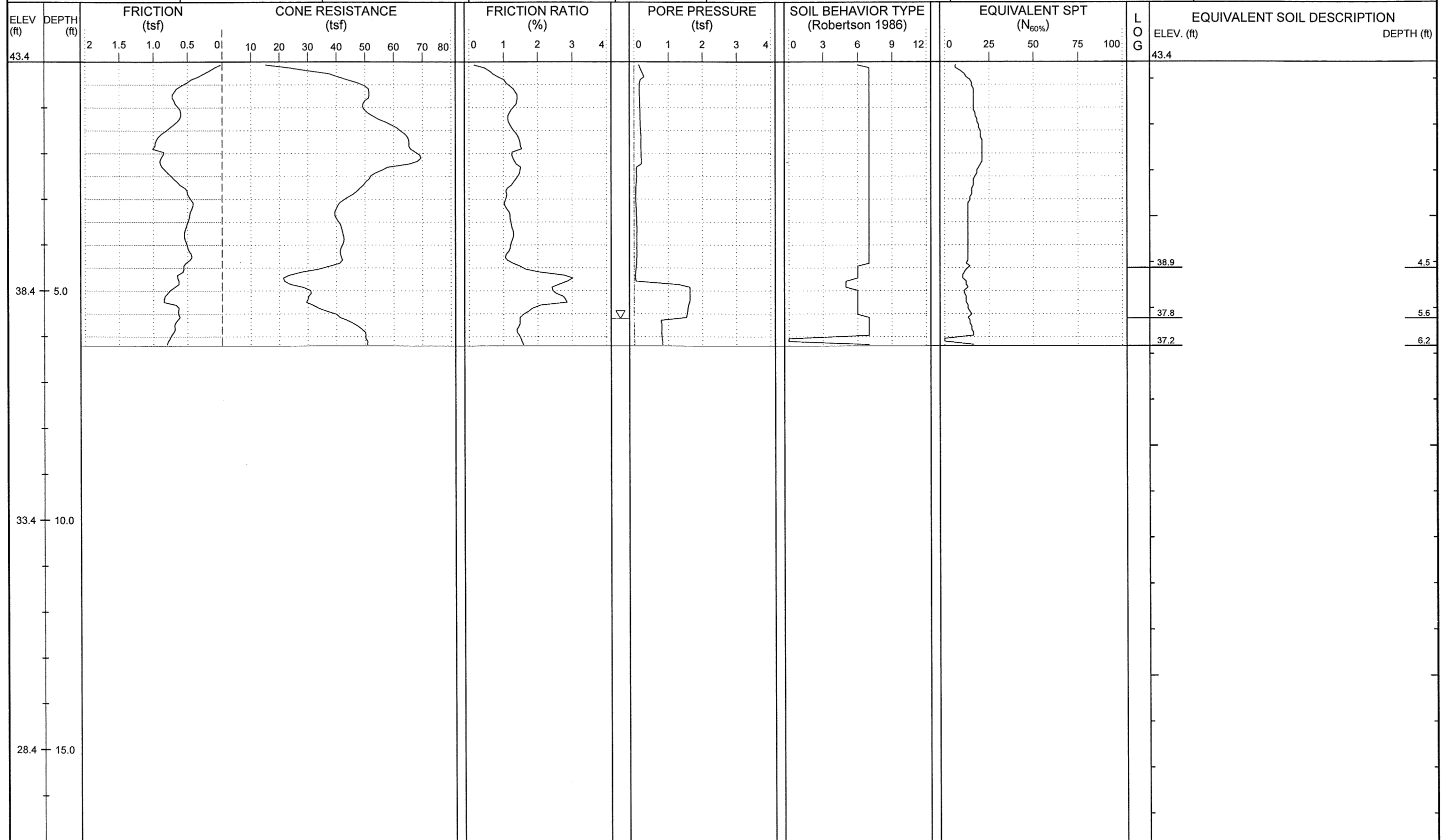


# NCDOT GEOTECHNICAL ENGINEERING UNIT



SHEET NO.: 11  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. 5.6, 24 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-36	STATION: 35+96	OFFSET: 39ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 43.4 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 179,190	EASTING: 2,335,921	START DATE: 05/12/09	CONE ID: DSA0866
				COMP. DATE: 05/12/09	DRILLER: Donald Coogan
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	

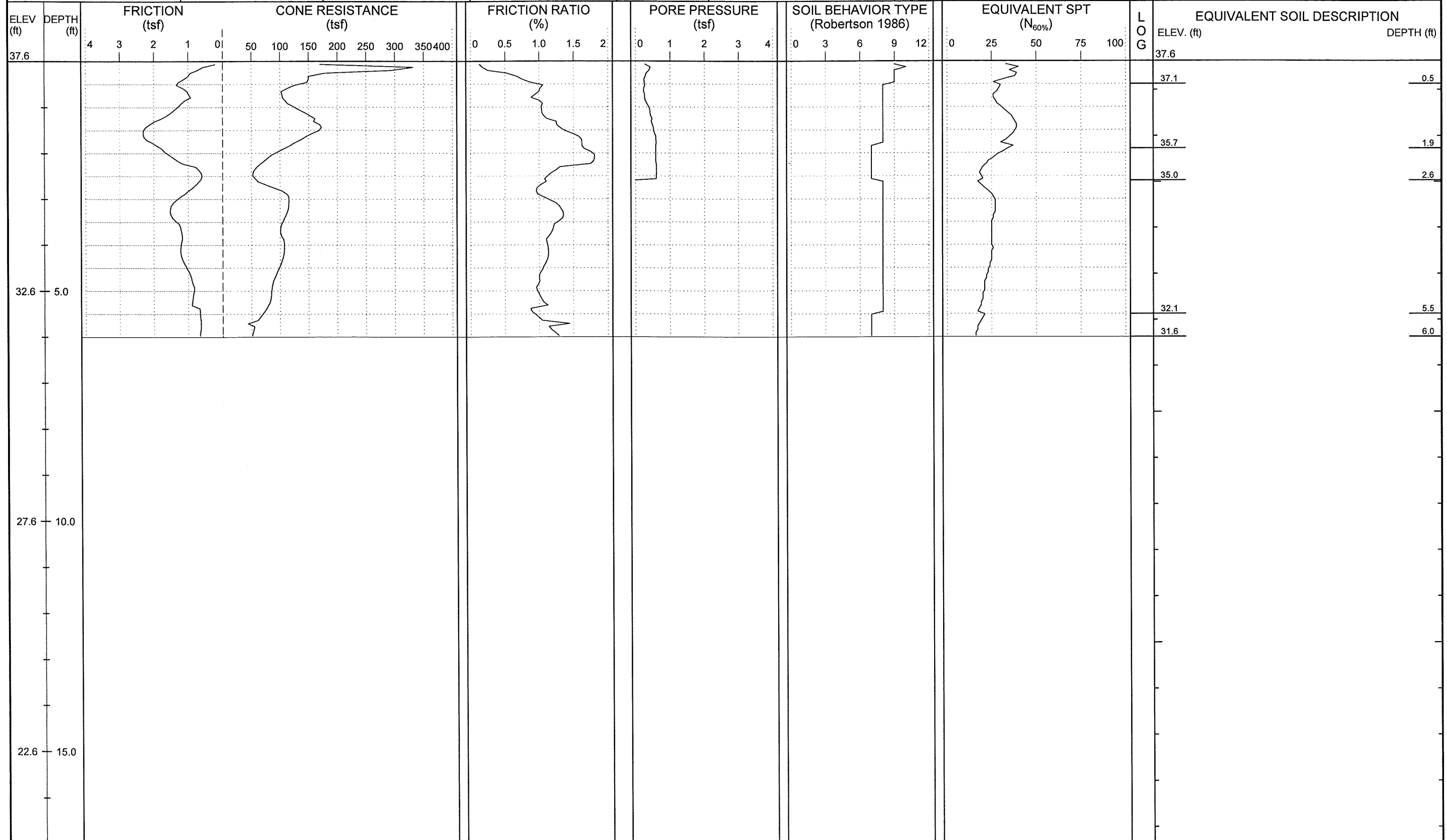




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH  
 SHEET NO.: 12  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-38	STATION: 38+00	OFFSET: 40ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 37.6 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 179,372	EASTING: 2,335,800	START DATE: 05/12/09	CONE ID: DSA0866
				24 HR. N/A	DRILLER: Donald Coogan
				COMP. DATE: 05/12/09	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	





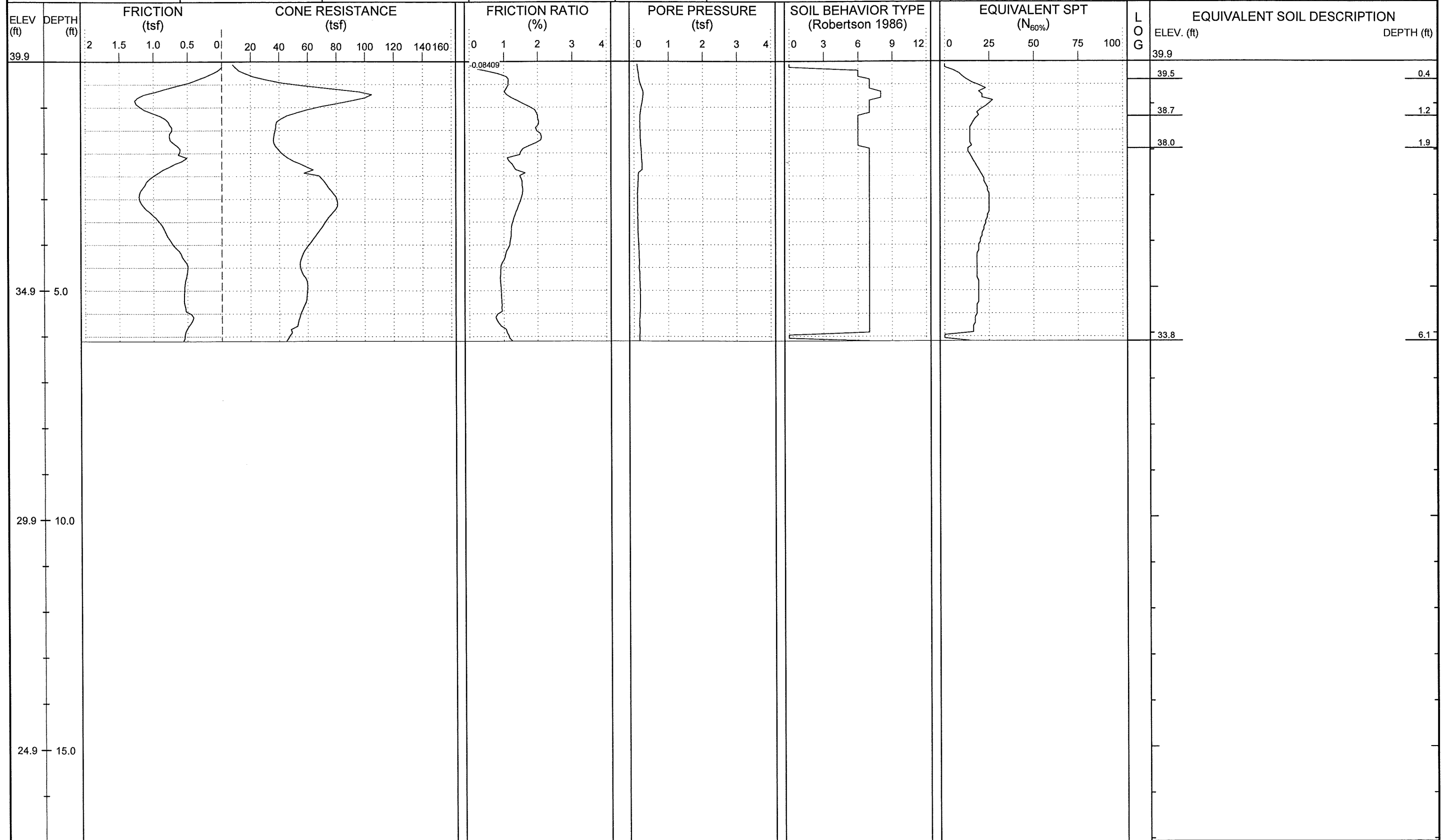




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH SHEET NO.: 14  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-44	STATION: 44+27	OFFSET: 46ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 39.9 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 180,004	EASTING: 2,335,752	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





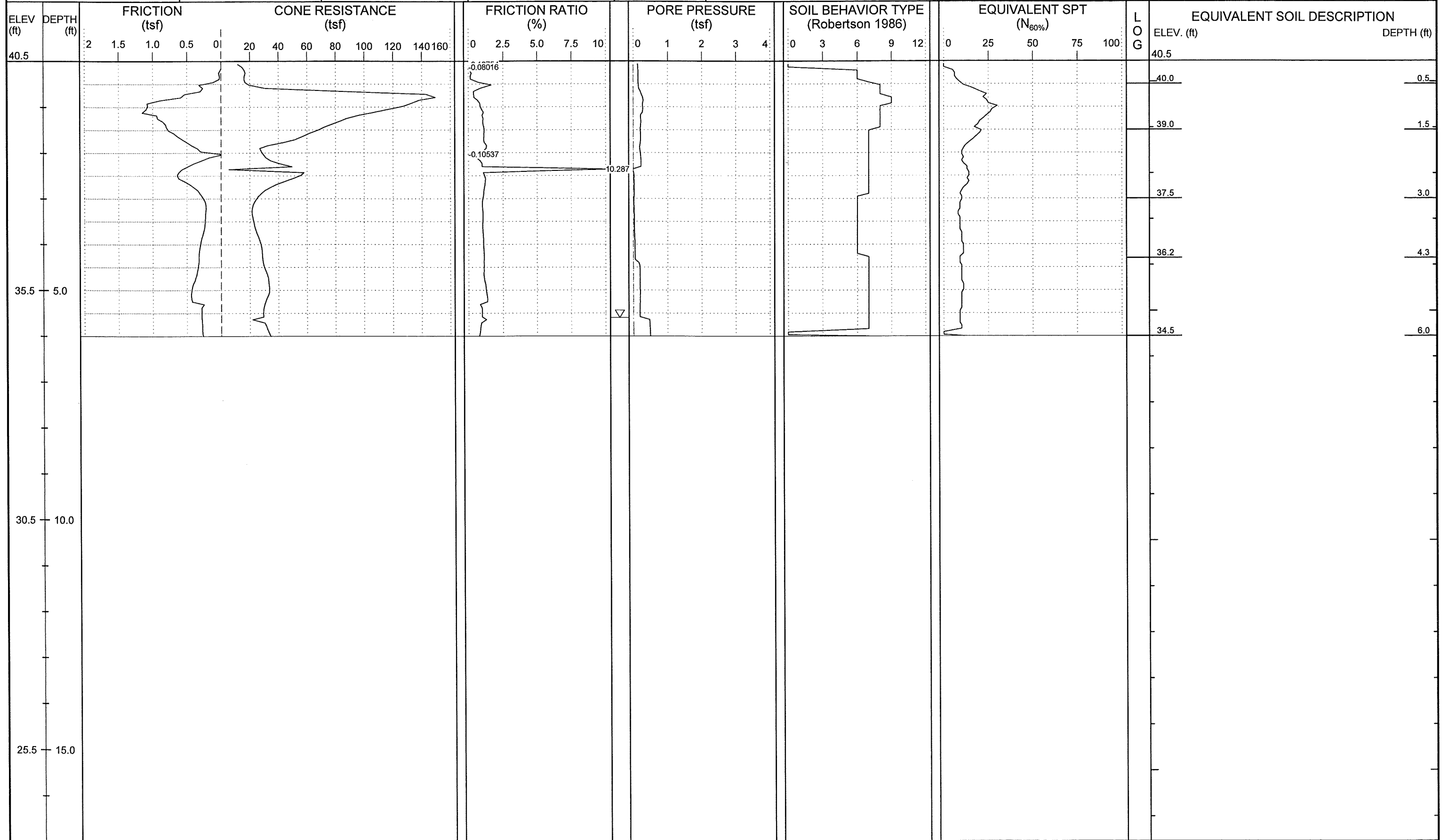


# NCDOT GEOTECHNICAL ENGINEERING UNIT



SHEET NO.: 16  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 5.6, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-52	STATION: 51+78	OFFSET: 45ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 40.5 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 180,737	EASTING: 2,335,592	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A









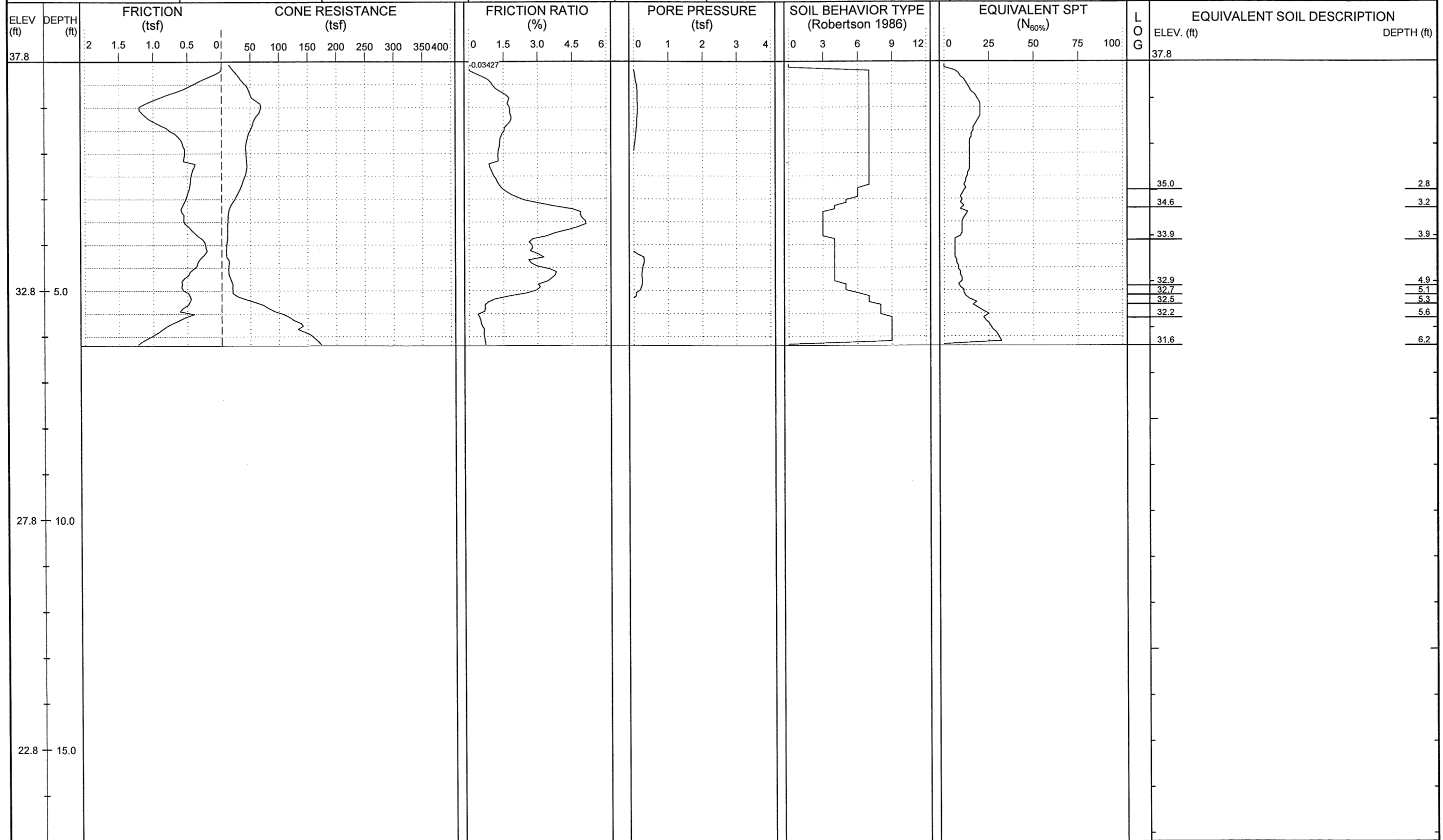




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH  
 SHEET NO.: 21  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-66	STATION: 66+00	OFFSET: 50ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 37.8 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 182,136	EASTING: 2,335,530	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



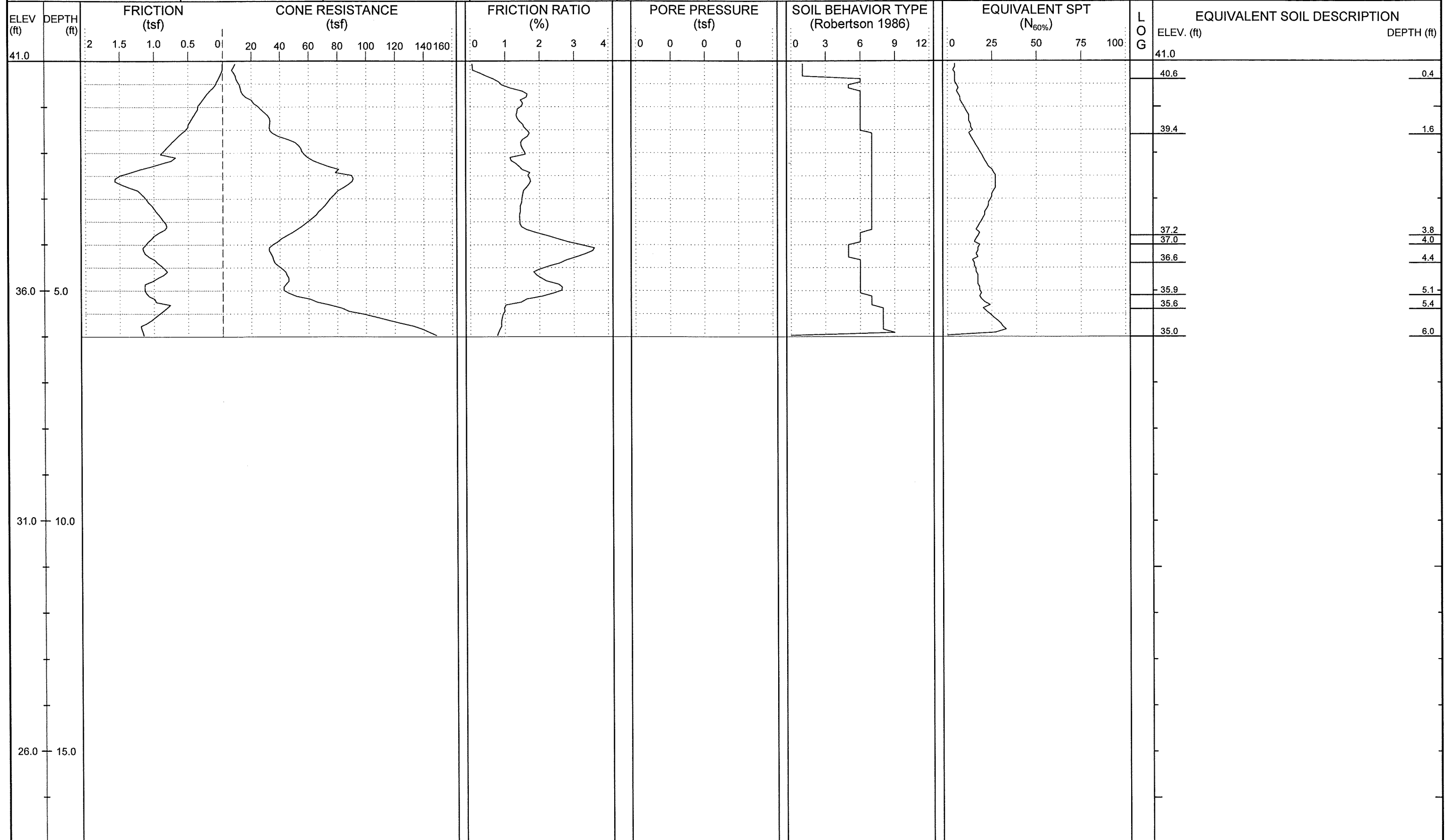




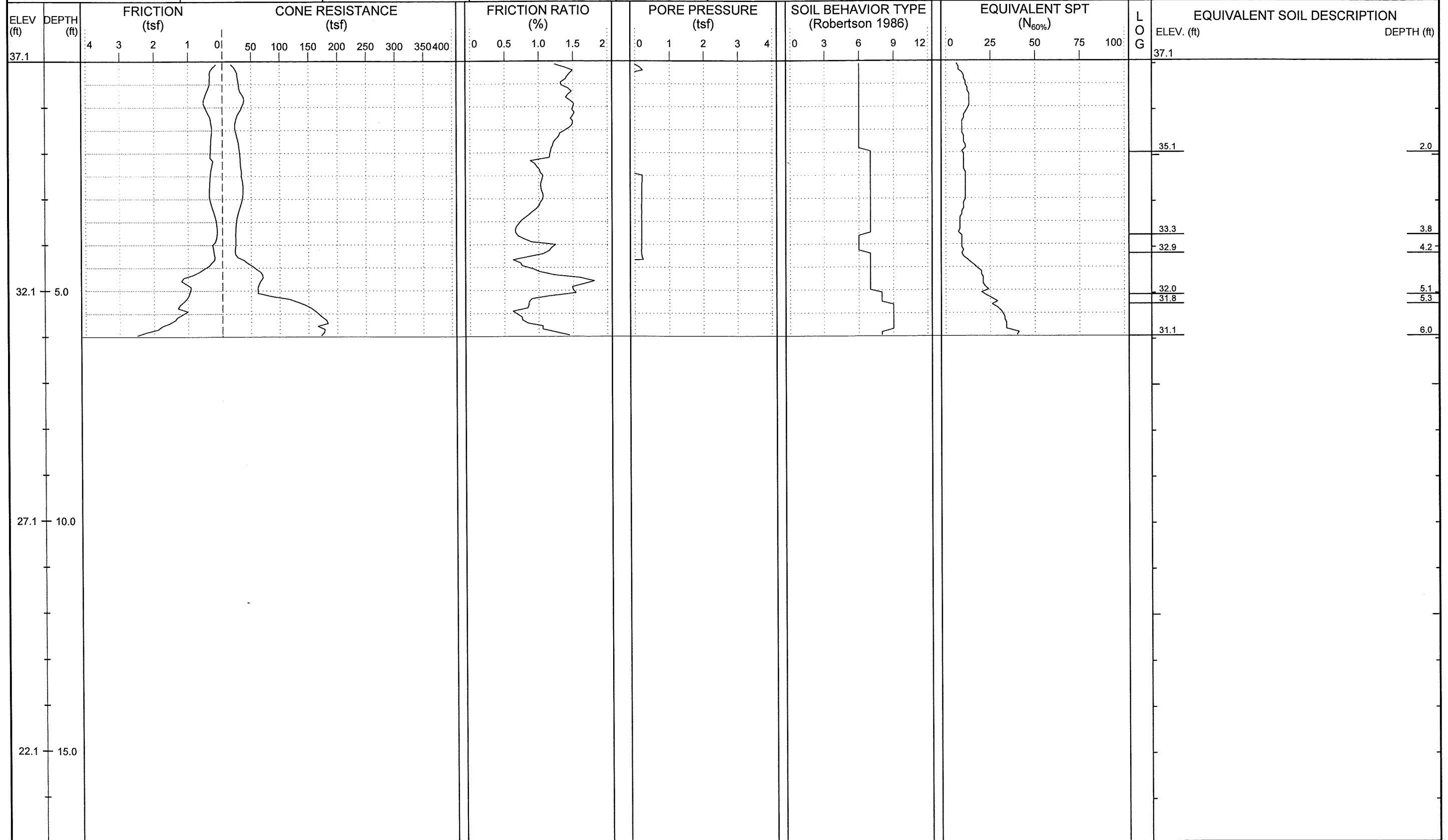
**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH  
 SHEET NO.: 22  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-68	STATION: 68+00	OFFSET: 34ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 41.0 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 182,340	EASTING: 2,335,455	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft):	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-72	STATION: 72+16	OFFSET: 57ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 37.1 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 182,756	EASTING: 2,335,452	START DATE: 05/12/09	COMP. DATE: 05/12/09
			0 HR. N/A	DRILLER: Donald Coogan	
			24 HR. N/A	TECHNICIAN: M.A.D.	
					SURFACE WATER DEPTH: N/A

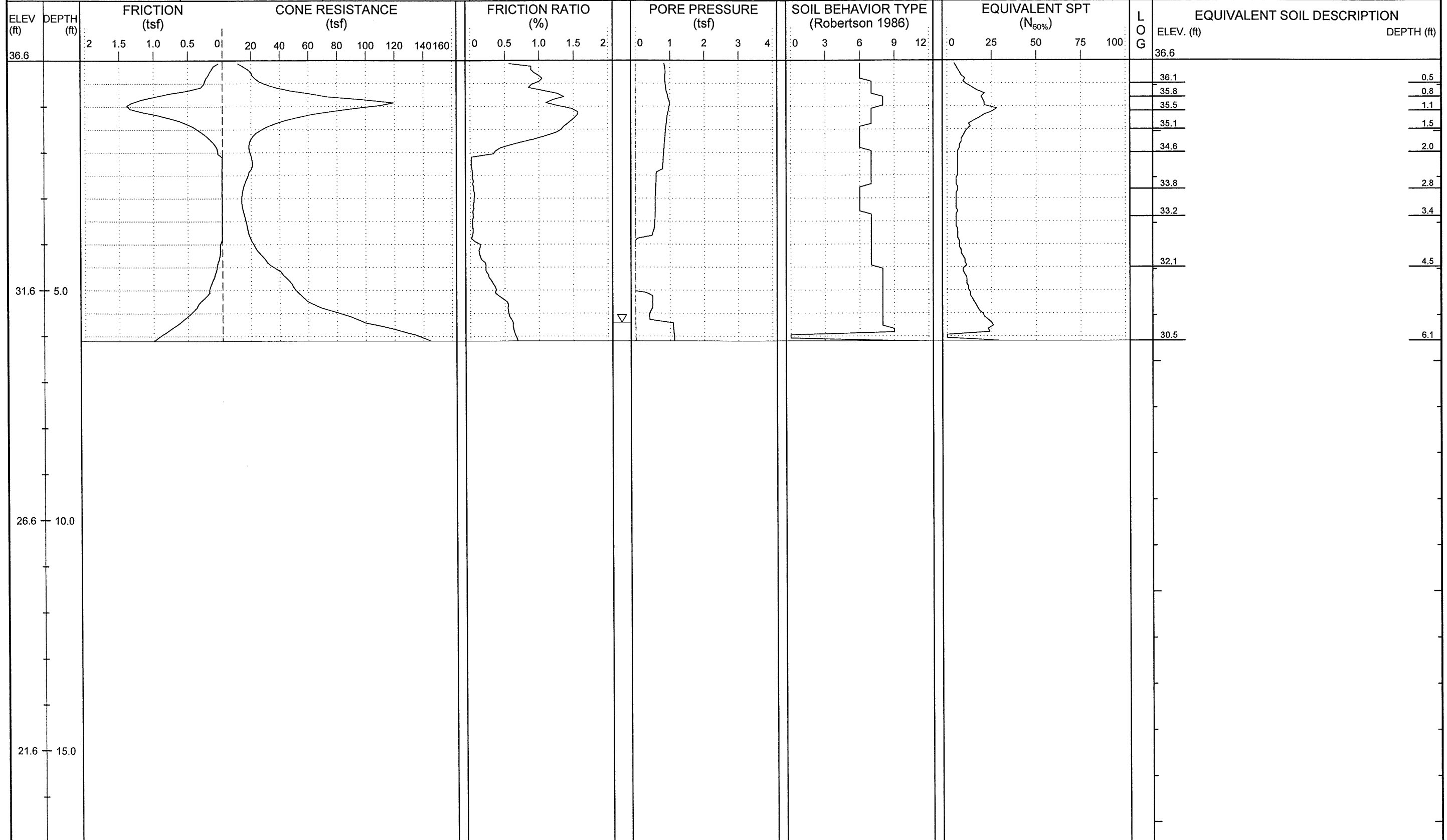




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

<b>ENGLISH</b>	SHEET NO.: 24
	PROJ. NO.: 34932.1.1
	TIP NO.: U-3338B
	COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 5.7, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-74	STATION: 74+00	OFFSET: 50ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 36.6 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 182,935	EASTING: 2,335,568	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

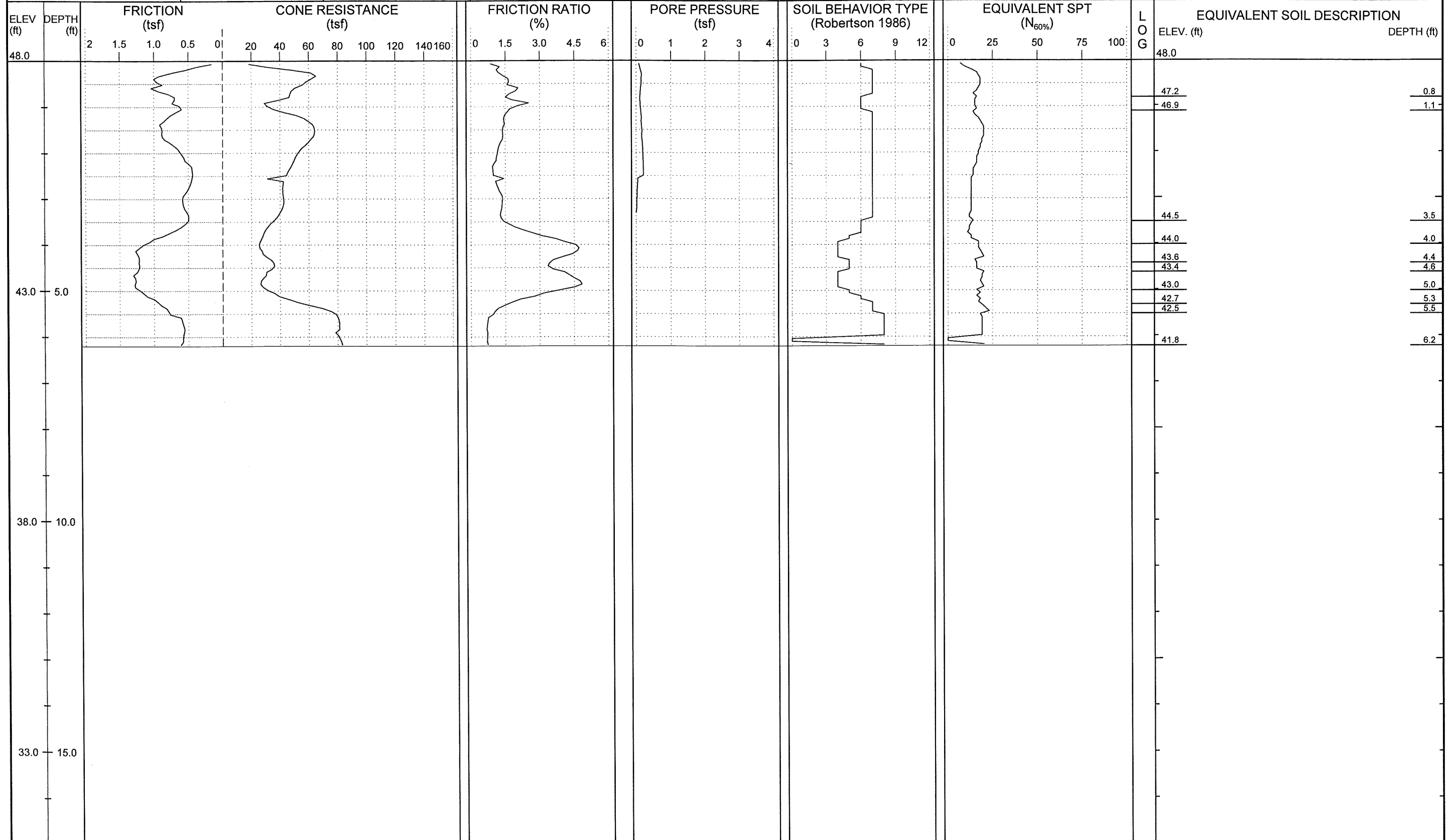




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

SHEET NO.:	25
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-76	STATION: 76+00	OFFSET: 50ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 48.0 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 183,135	EASTING: 2,335,578	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

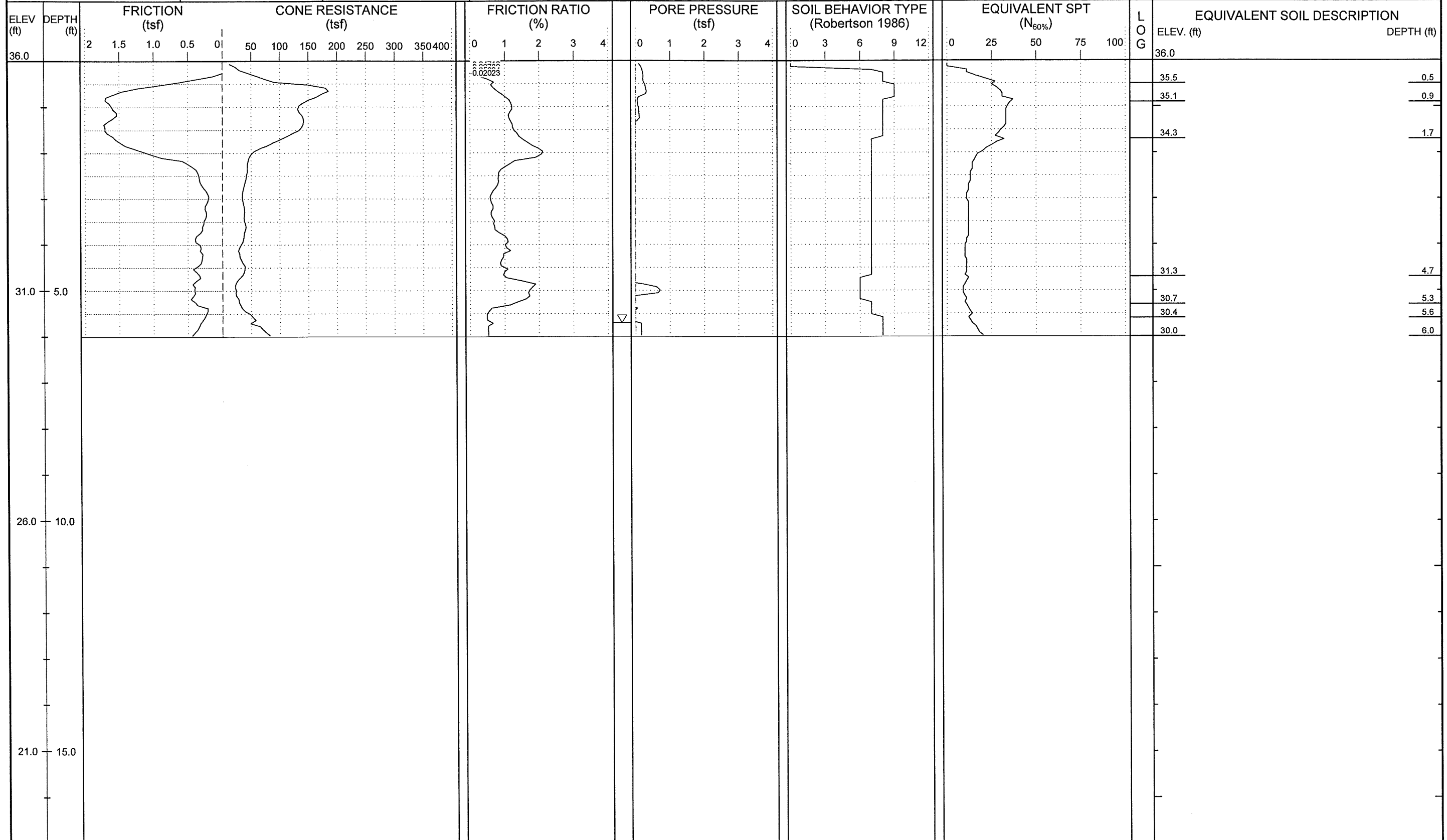




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

<b>ENGLISH</b>	SHEET NO.: 26
	PROJ. NO.: 34932.1.1
	TIP NO.: U-3338B
	COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 5.7, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-78.5	STATION: 78+50	OFFSET: 50ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 36.0 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 183,384	EASTING: 2,335,590	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

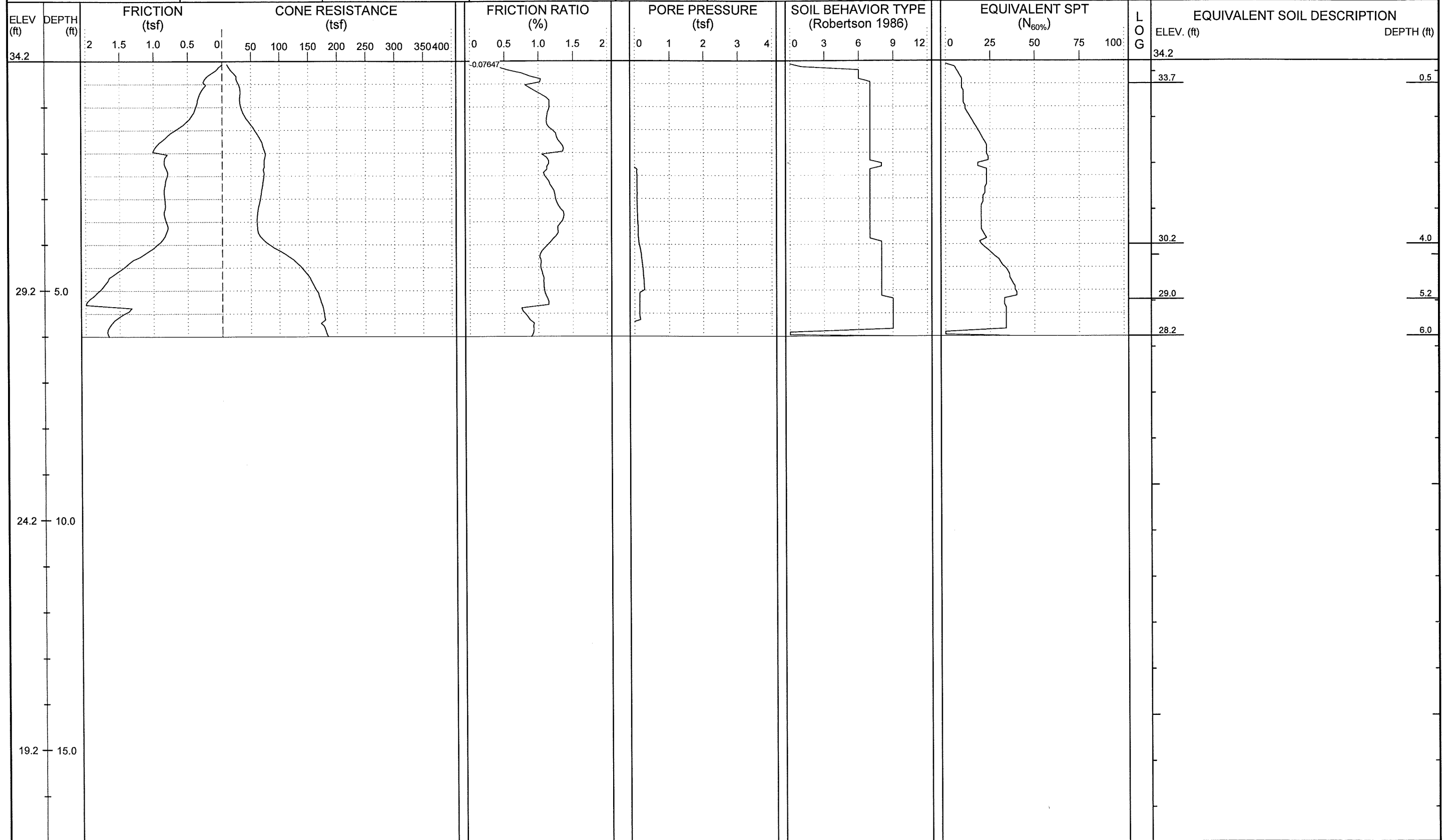




# NCDOT GEOTECHNICAL ENGINEERING UNIT

SHEET NO.:	27
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-82	STATION: 82+00	OFFSET: 40ft RT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 34.2 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 183,734	EASTING: 2,335,597	START DATE: 05/12/09	CONE ID: DSA0866
				24 HR. N/A	DRILLER: Donald Coogan
				COMP. DATE: 05/12/09	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	



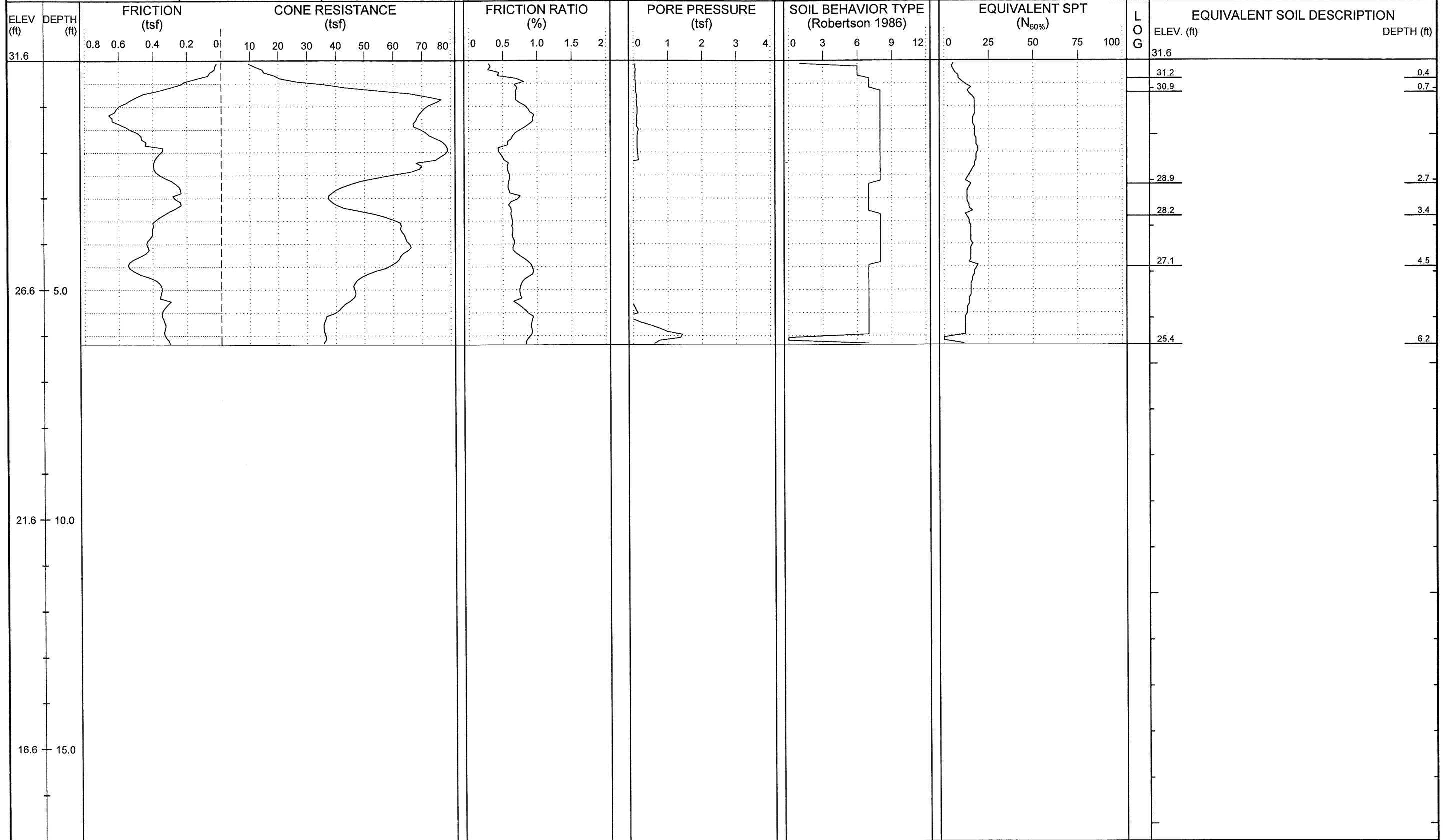




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

SHEET NO.: 29  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: L-88	STATION: 88+00	OFFSET: 40ft LT	ALIGNMENT: -L-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 31.6 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 184,338	EASTING: 2,335,546	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



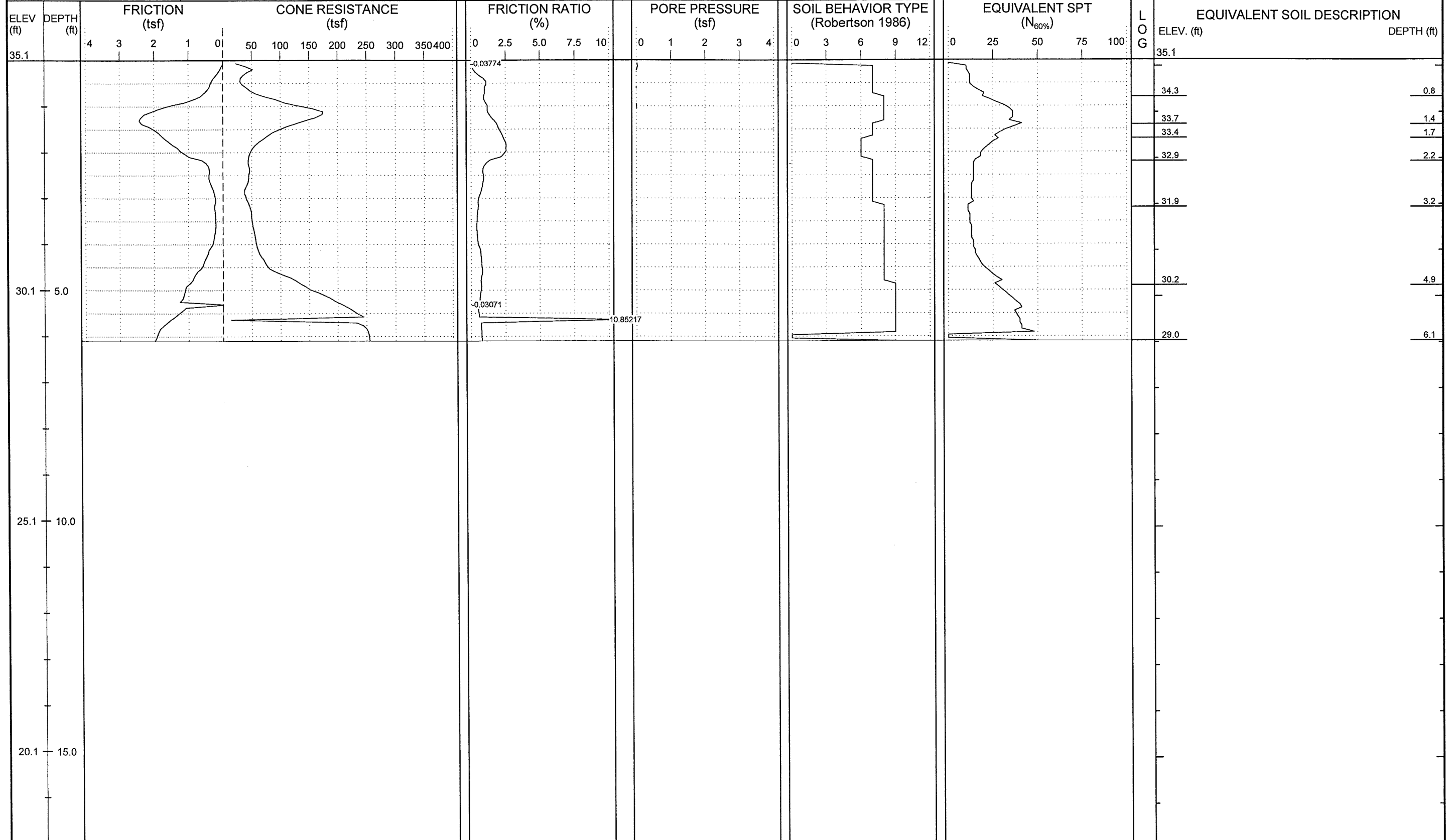




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

SHEET NO.: 30  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y10-12	STATION: 12+08	OFFSET: 15ft RT	ALIGNMENT: -Y10-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 35.1 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 183,468	EASTING: 2,335,352	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





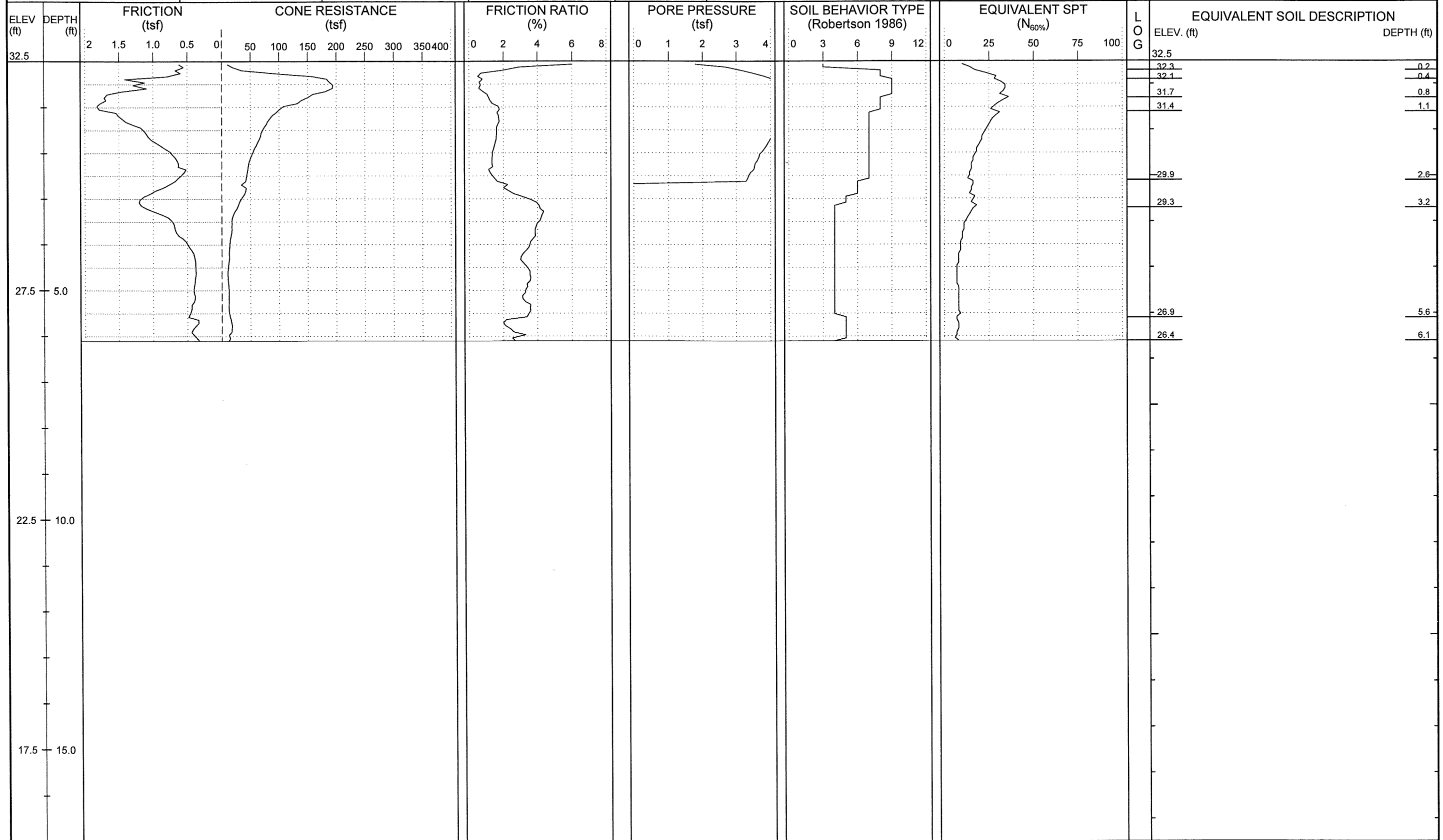




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH  
 SHEET NO.: 33  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y1-16	STATION: 16+00	OFFSET: 40ft LT	ALIGNMENT: -Y1-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 32.5 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 177,334	EASTING: 2,336,035	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



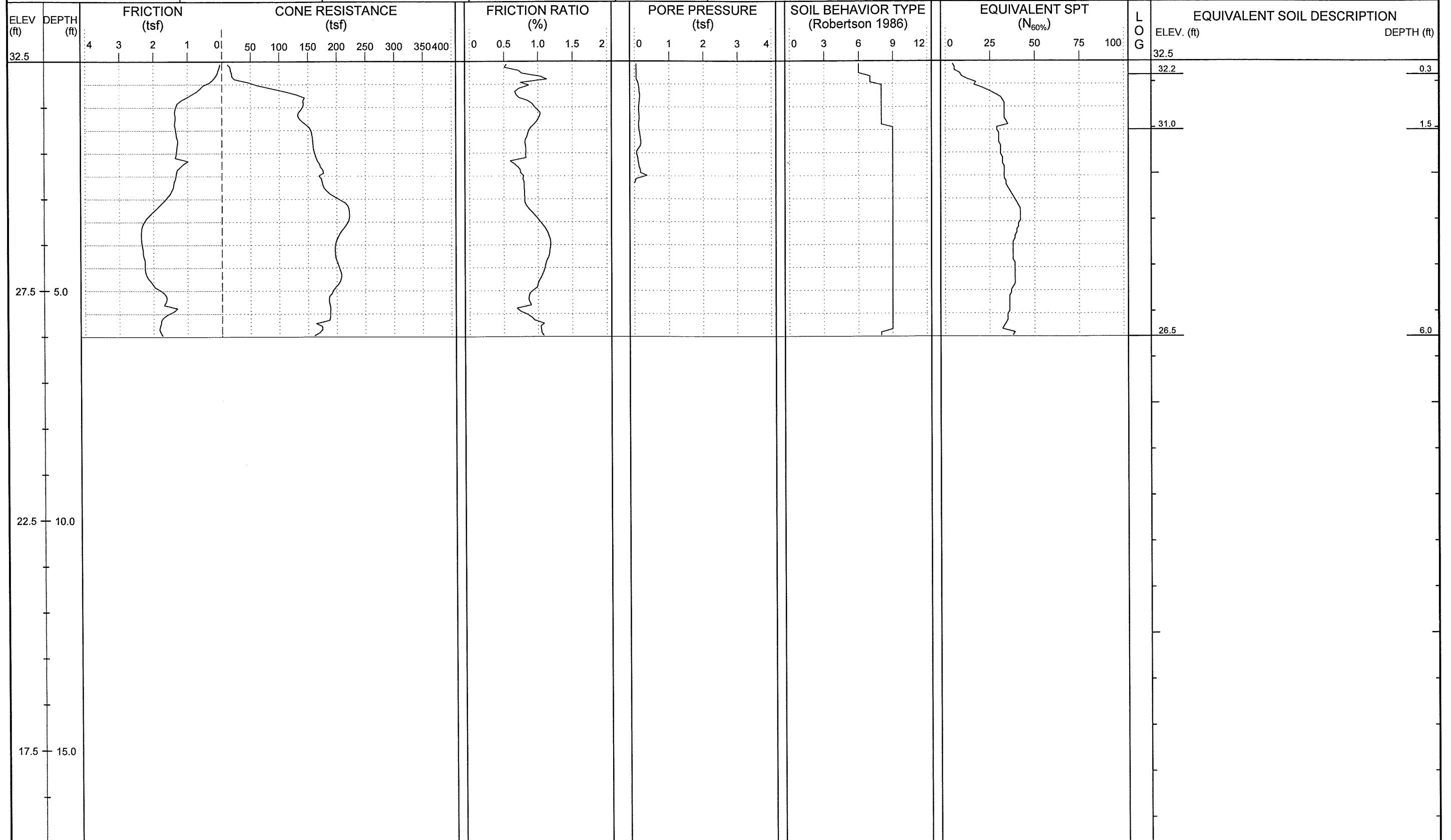




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH	SHEET NO.:	35
	PROJ. NO.:	34932.1.1
	TIP NO.:	U-3338B
	COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y12-11	STATION: 11+00	OFFSET: 25ft LT	ALIGNMENT: -Y12-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 32.5 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 184,013	EASTING: 2,335,673	24 HR. N/A	CONE ID: DSA0866
				START DATE: 05/13/09	DRILLER: Donald Coogan
				COMP. DATE: 05/13/09	TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

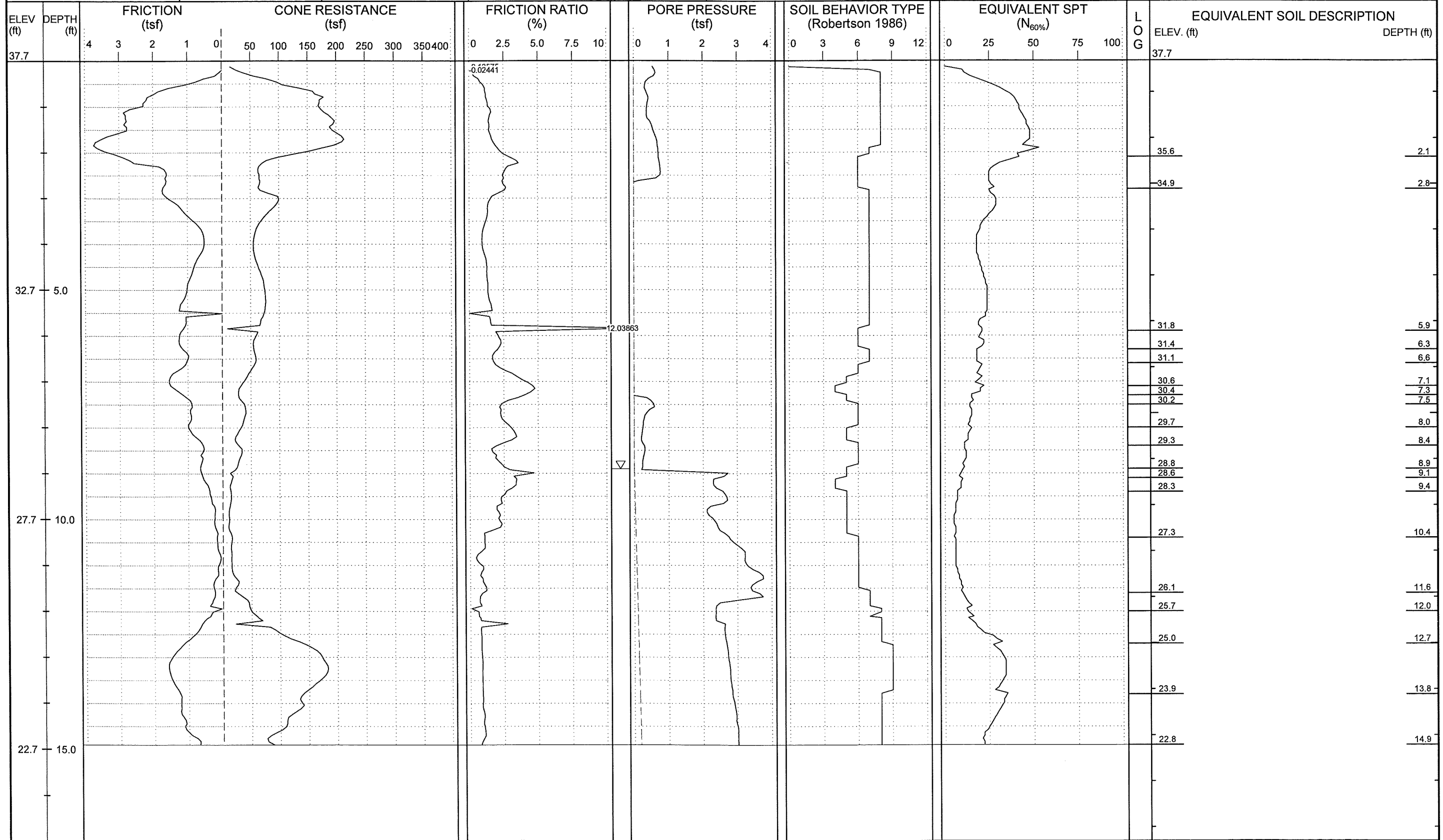




# NCDOT GEOTECHNICAL ENGINEERING UNIT

SHEET NO.:	36
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. 8.9, 24 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y1-22	STATION: 22+00	OFFSET: 42ft LT	ALIGNMENT: -Y1-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 37.7 ft	TOTAL DEPTH: 14.9 ft	NORTHING: 177,471	EASTING: 2,336,621	START DATE: 05/13/09	CONE ID: DSA0866
				COMP. DATE: 05/13/09	DRILLER: Donald Coogan
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	



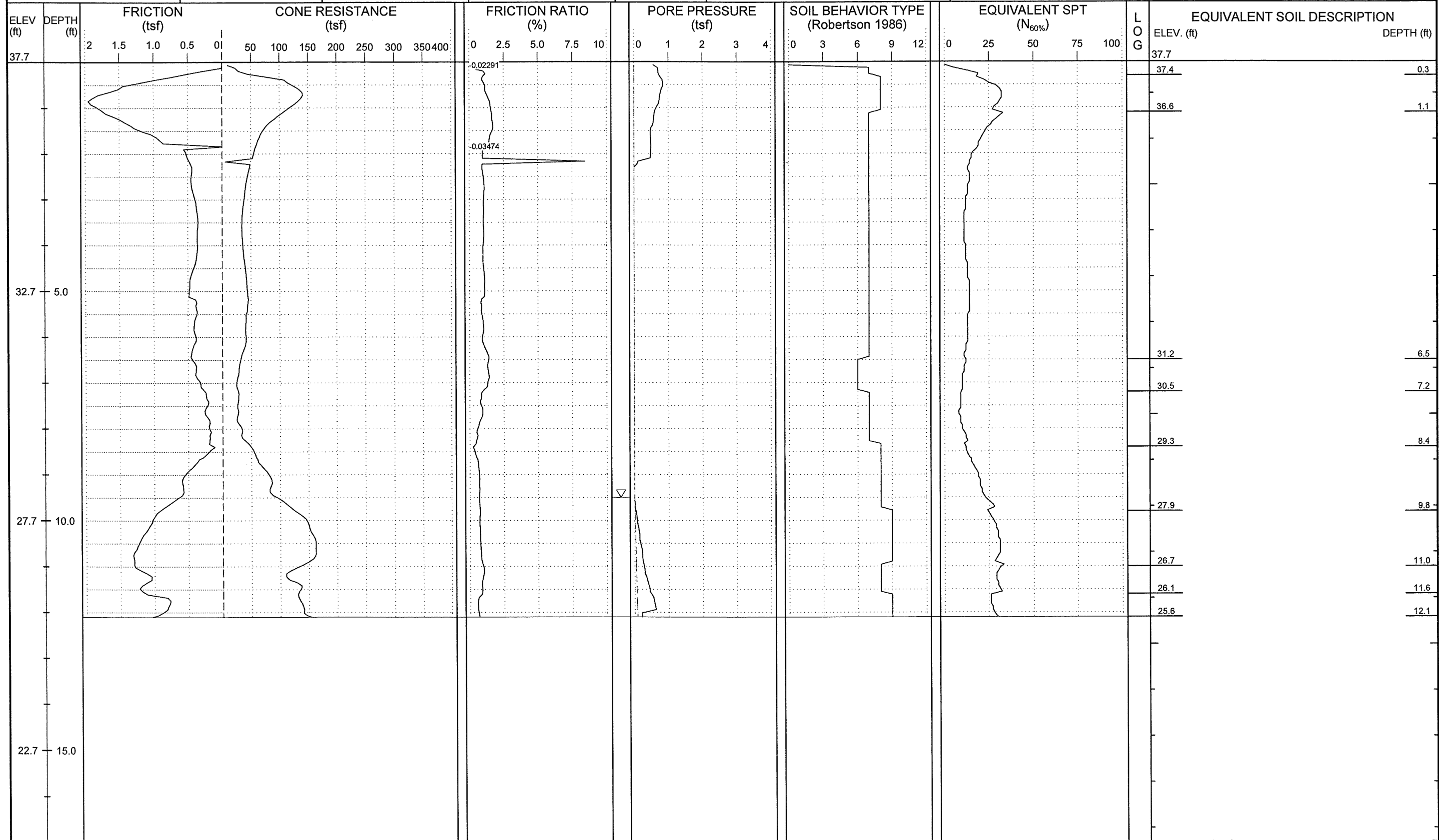


**NCDOT GEOTECHNICAL ENGINEERING UNIT**



SHEET NO.: 37  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 9.5, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y1-24	STATION: 24+00	OFFSET: 38ft LT	ALIGNMENT: -Y1-	ROD TYPE: N/A	CONE ID: DSA0866
DRILLER: Donald Coogan	TECHNICIAN: M.A.D.	SURFACE WATER DEPTH: N/A			
COLLAR ELEV.: 37.7 ft	TOTAL DEPTH: 12.1 ft	NORTHING: 177,496	EASTING: 2,336,823	START DATE: 05/13/09	COMP. DATE: 05/13/09





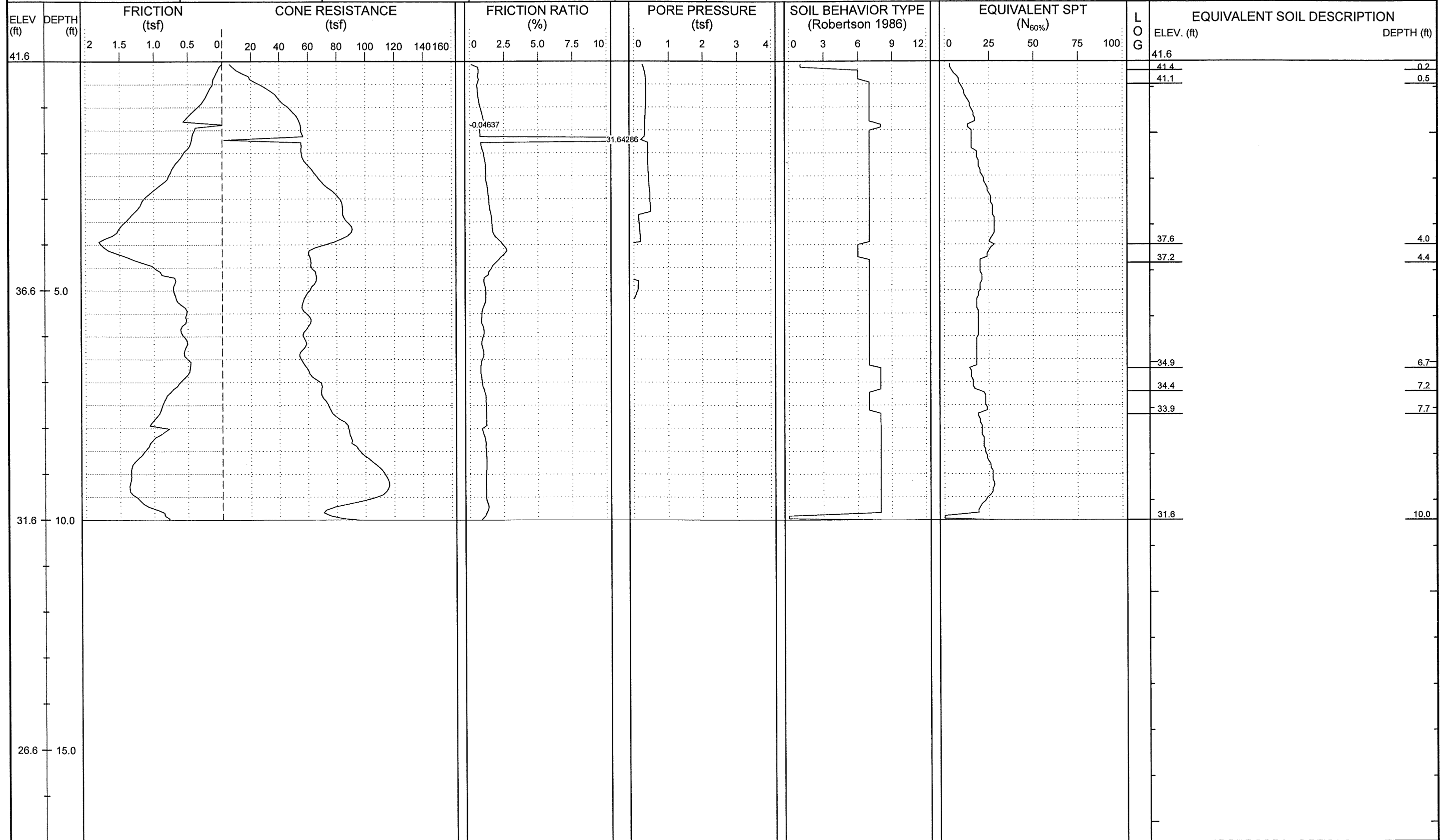


# NCDOT GEOTECHNICAL ENGINEERING UNIT



SHEET NO.: 38  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y1-26	STATION: 26+00	OFFSET: 50ft RT	ALIGNMENT: -Y1-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 41.6 ft	TOTAL DEPTH: 10.0 ft	NORTHING: 177,423	EASTING: 2,337,028	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



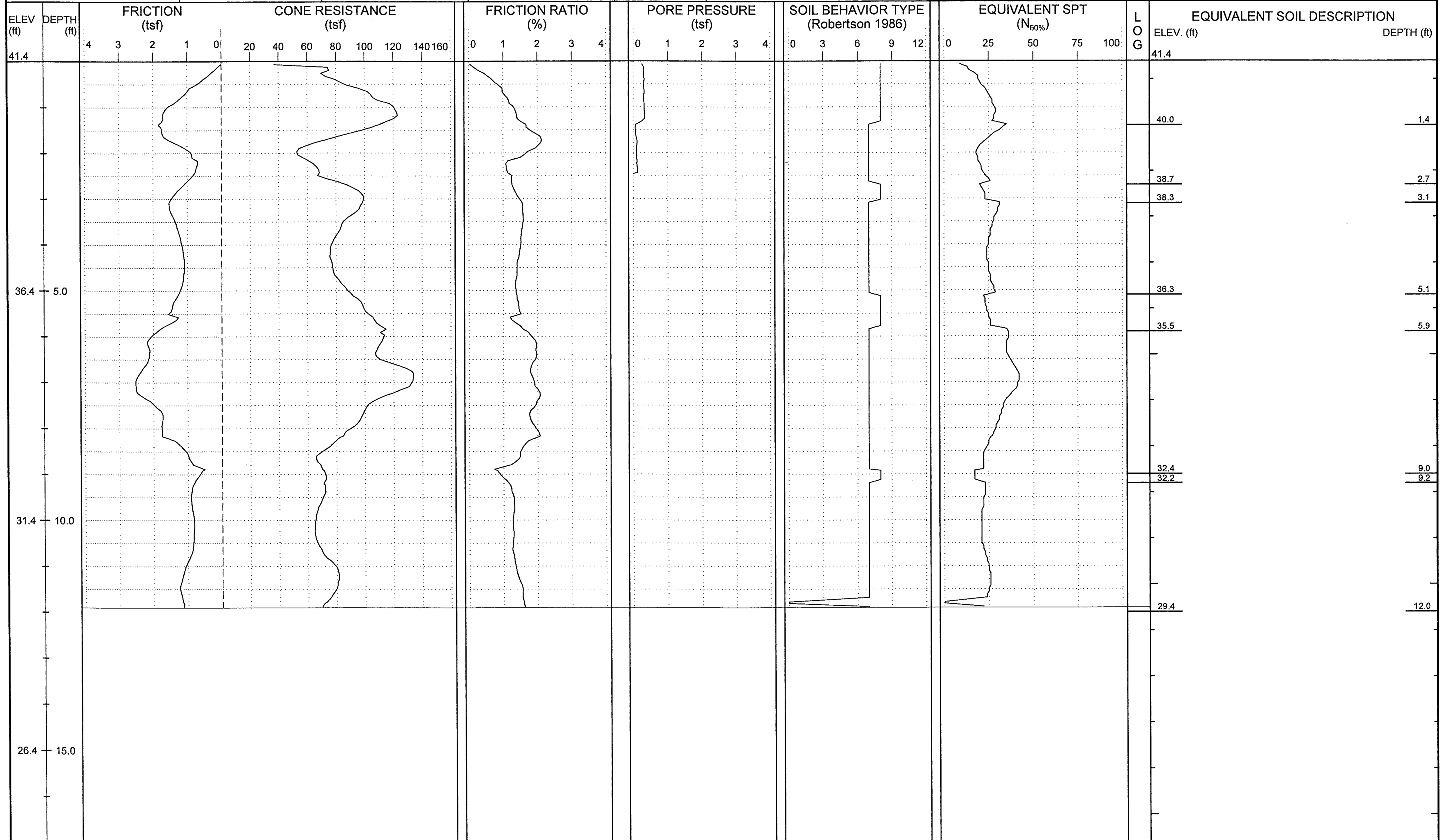


**NCDOT GEOTECHNICAL ENGINEERING UNIT**



SHEET NO.: 39  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y1-28	STATION: 28+00	OFFSET: 34ft LT	ALIGNMENT: -Y1-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 41.4 ft	TOTAL DEPTH: 11.9 ft	NORTHING: 177,506	EASTING: 2,337,227	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



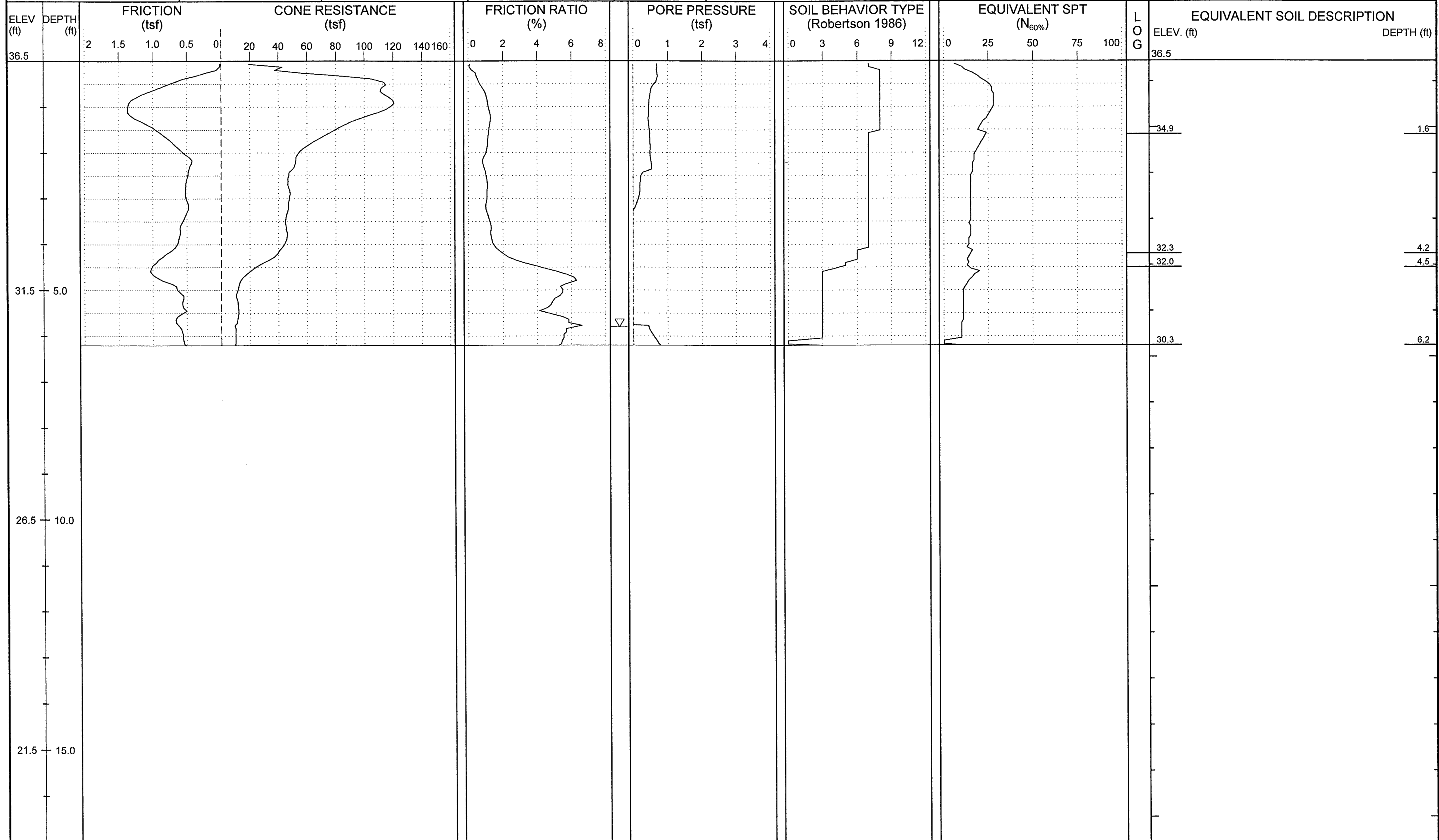


**NCDOT GEOTECHNICAL ENGINEERING UNIT**



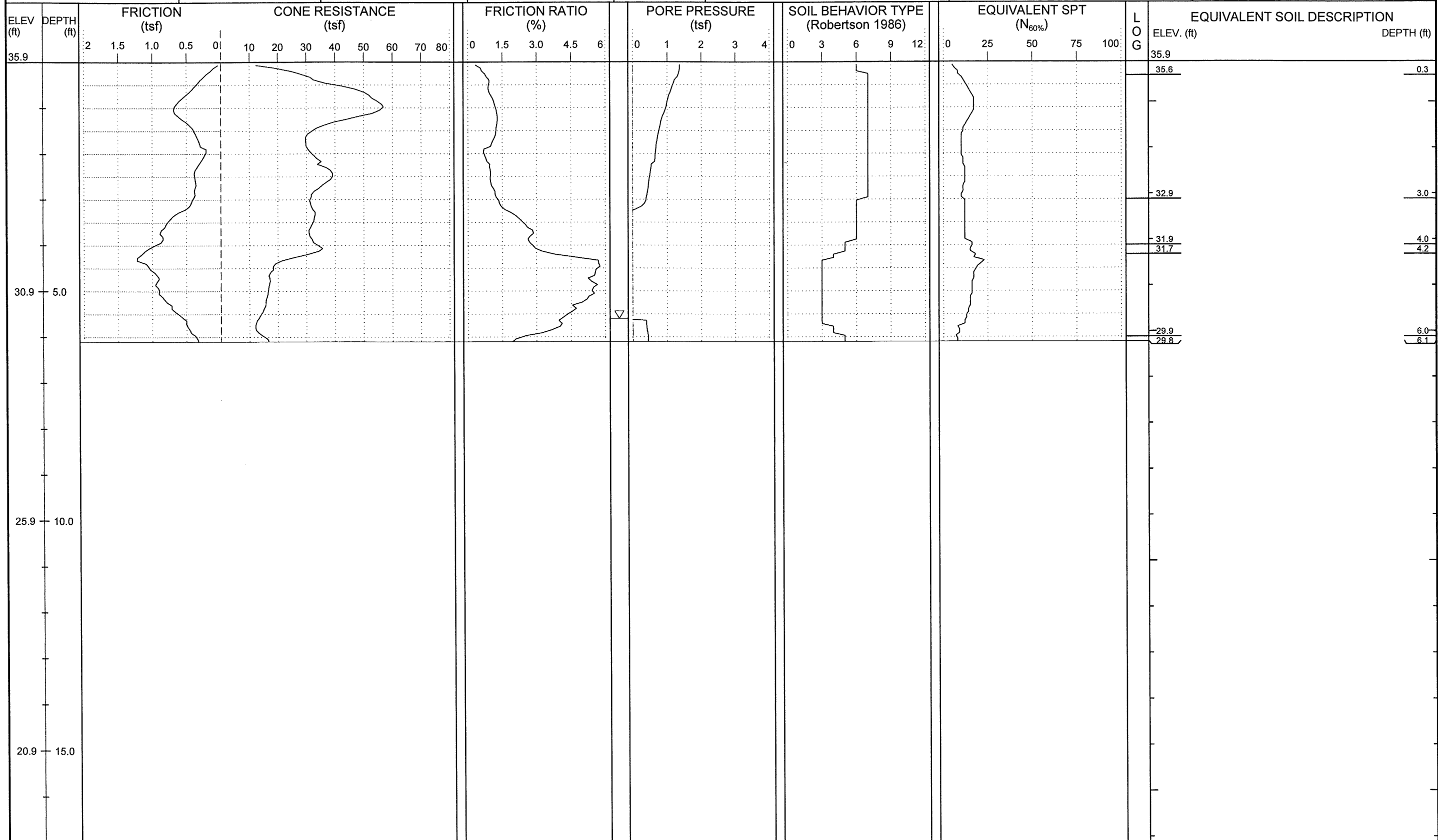
SHEET NO.: 40  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. 5.8, 24 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y2-11	STATION: 11+00	OFFSET: 15ft LT	ALIGNMENT: -Y2-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 36.5 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 178,343	EASTING: 2,336,167	START DATE: 05/13/09	CONE ID: DSA0866
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					COMP. DATE: 05/13/09
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y2-12	STATION: 12+00	OFFSET: 20ft RT	ALIGNMENT: -Y2-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 35.9 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 178,321	EASTING: 2,336,271	START DATE: 05/13/09	COMP. DATE: 05/13/09
				SURFACE WATER DEPTH: N/A	



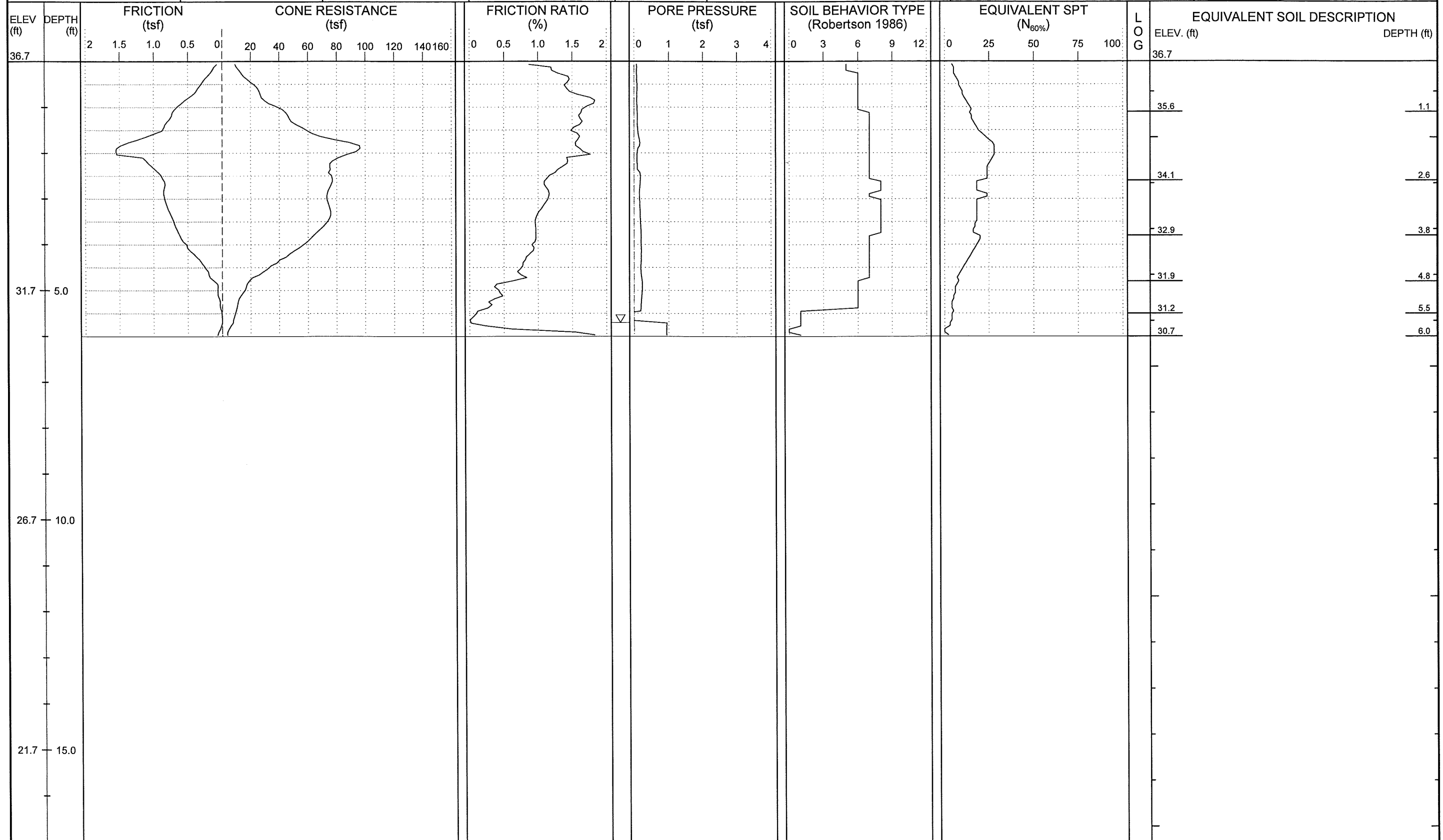


# NCDOT GEOTECHNICAL ENGINEERING UNIT



SHEET NO.: 42  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 5.7, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y4-11	STATION: 11+00	OFFSET: 25ft RT	ALIGNMENT: -Y4-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 36.7 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 179,610	EASTING: 2,335,892	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

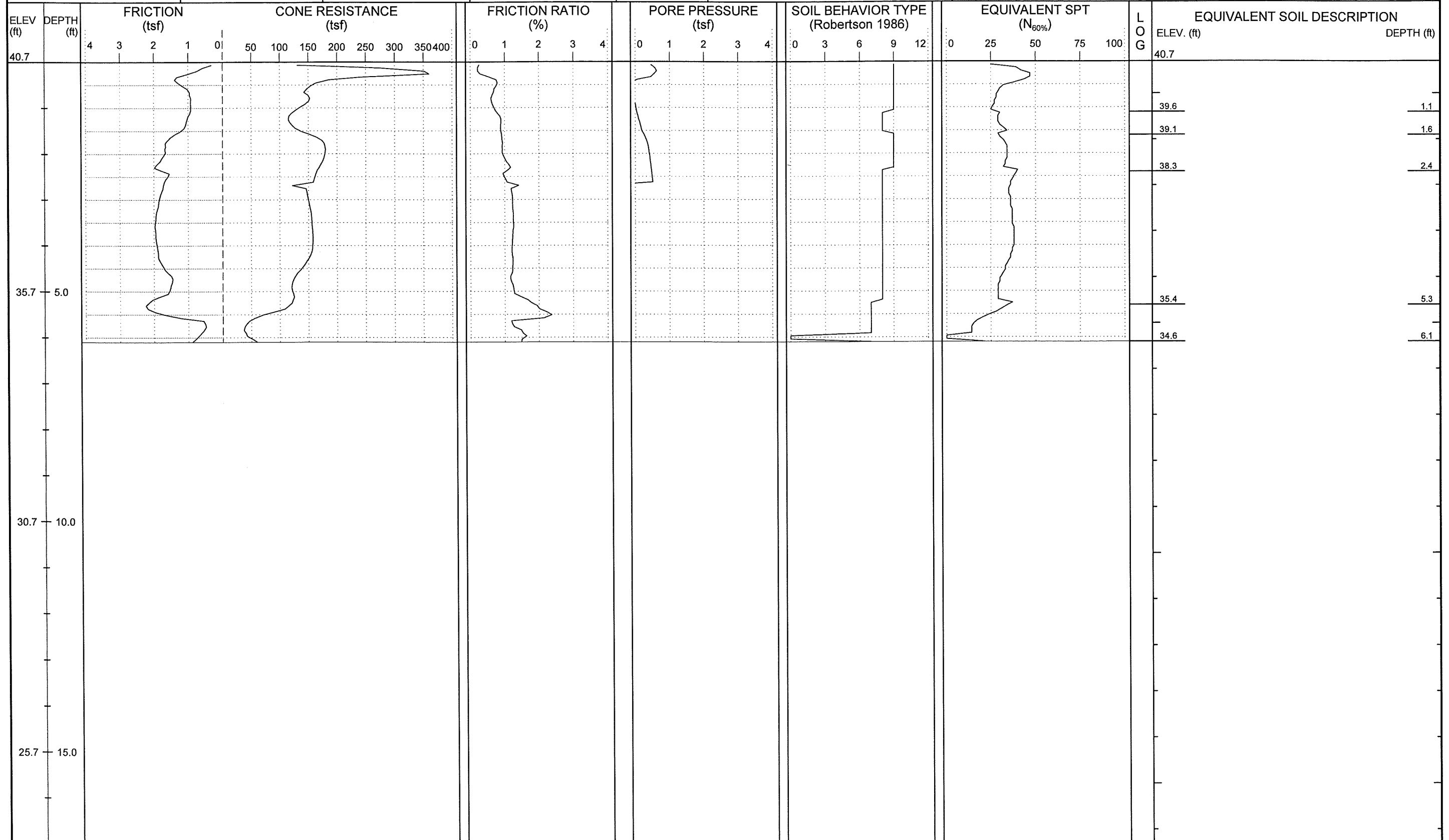








PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft)	DRILL METHOD: Direct Push
BORING NO.: Y6-16	STATION: 16+00	OFFSET: 60ft RT	ALIGNMENT: -Y6-	0 HR. N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 40.7 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 181,043	EASTING: 2,335,009	24 HR. N/A	ROD TYPE: N/A
				START DATE: 05/13/09	CONE ID: DSA0866
				COMP. DATE: 05/13/09	DRILLER: Donald Coogan
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	



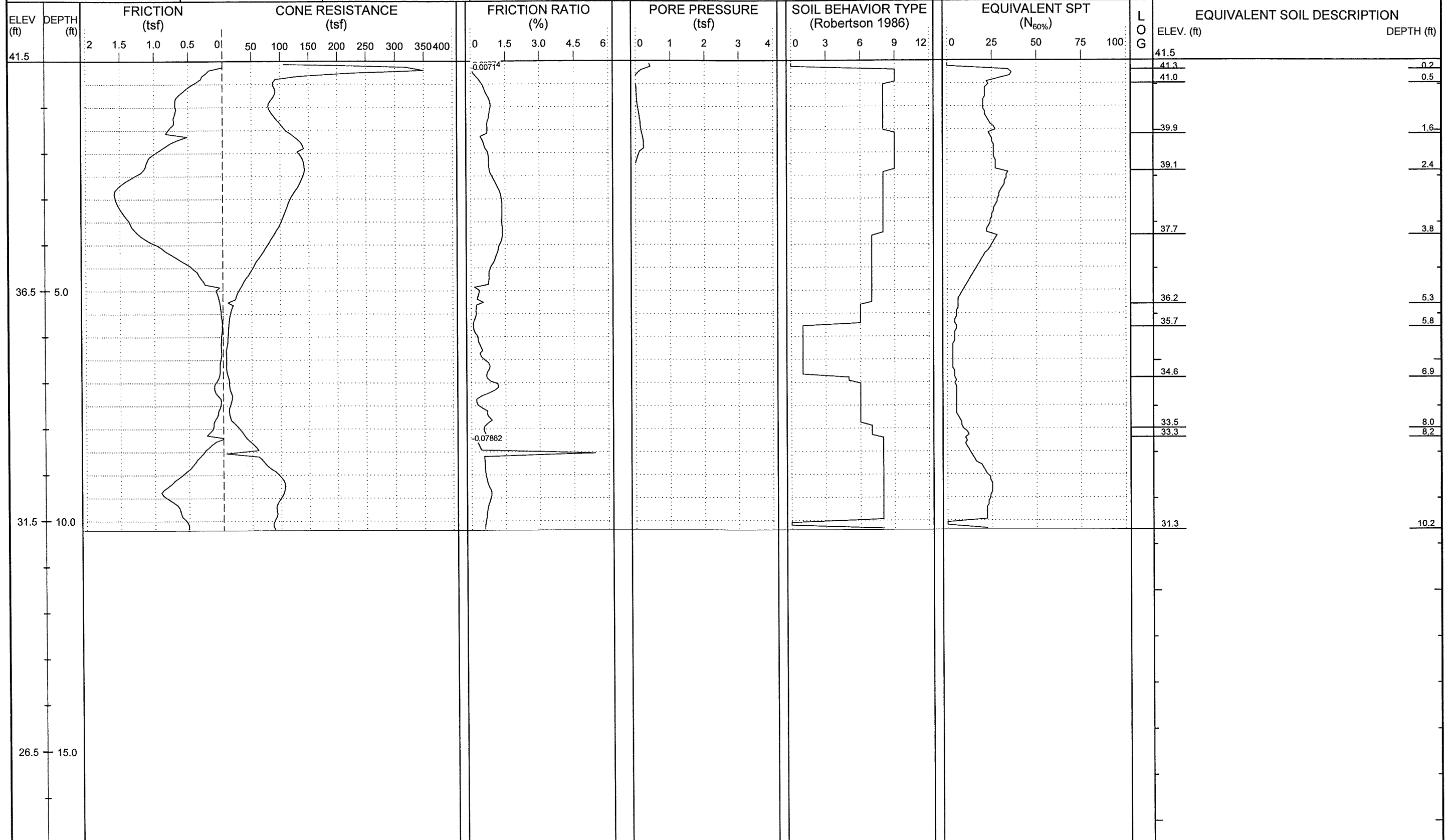




# NCDOT GEOTECHNICAL ENGINEERING UNIT

SHEET NO.: 46  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y6-18	STATION: 18+00	OFFSET: 50ft LT	ALIGNMENT: -Y6-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 41.5 ft	TOTAL DEPTH: 10.2 ft	NORTHING: 181,203	EASTING: 2,335,178	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

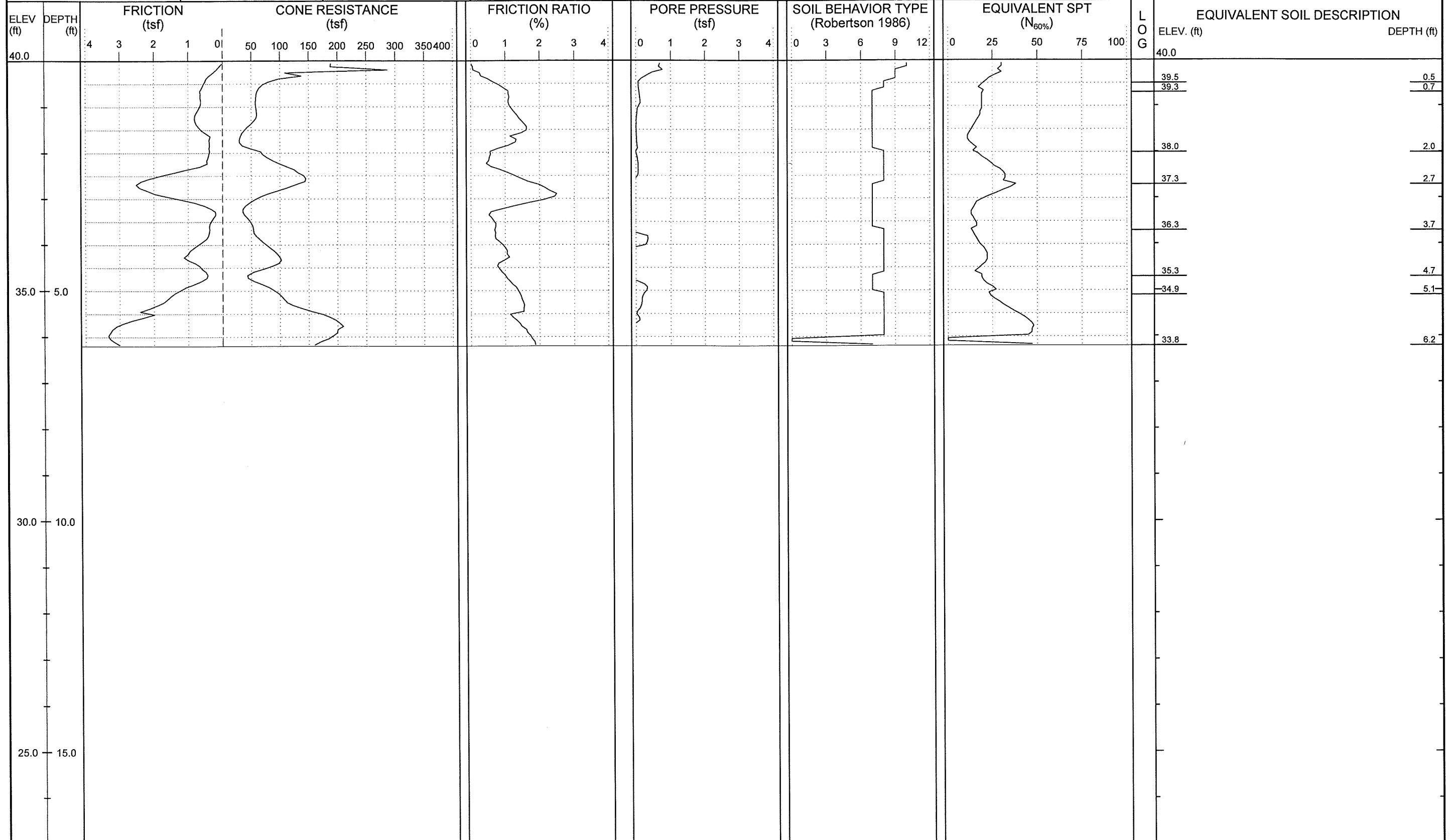




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

SHEET NO.: 47  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y6-22	STATION: 22+24	OFFSET: 50ft LT	ALIGNMENT: -Y6-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 40.0 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 181,284	EASTING: 2,335,595	START DATE: 05/13/09	CONE ID: DSA0866
				24 HR. N/A	COMP. DATE: 05/13/09
				DRILLER: Donald Coogan	
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	

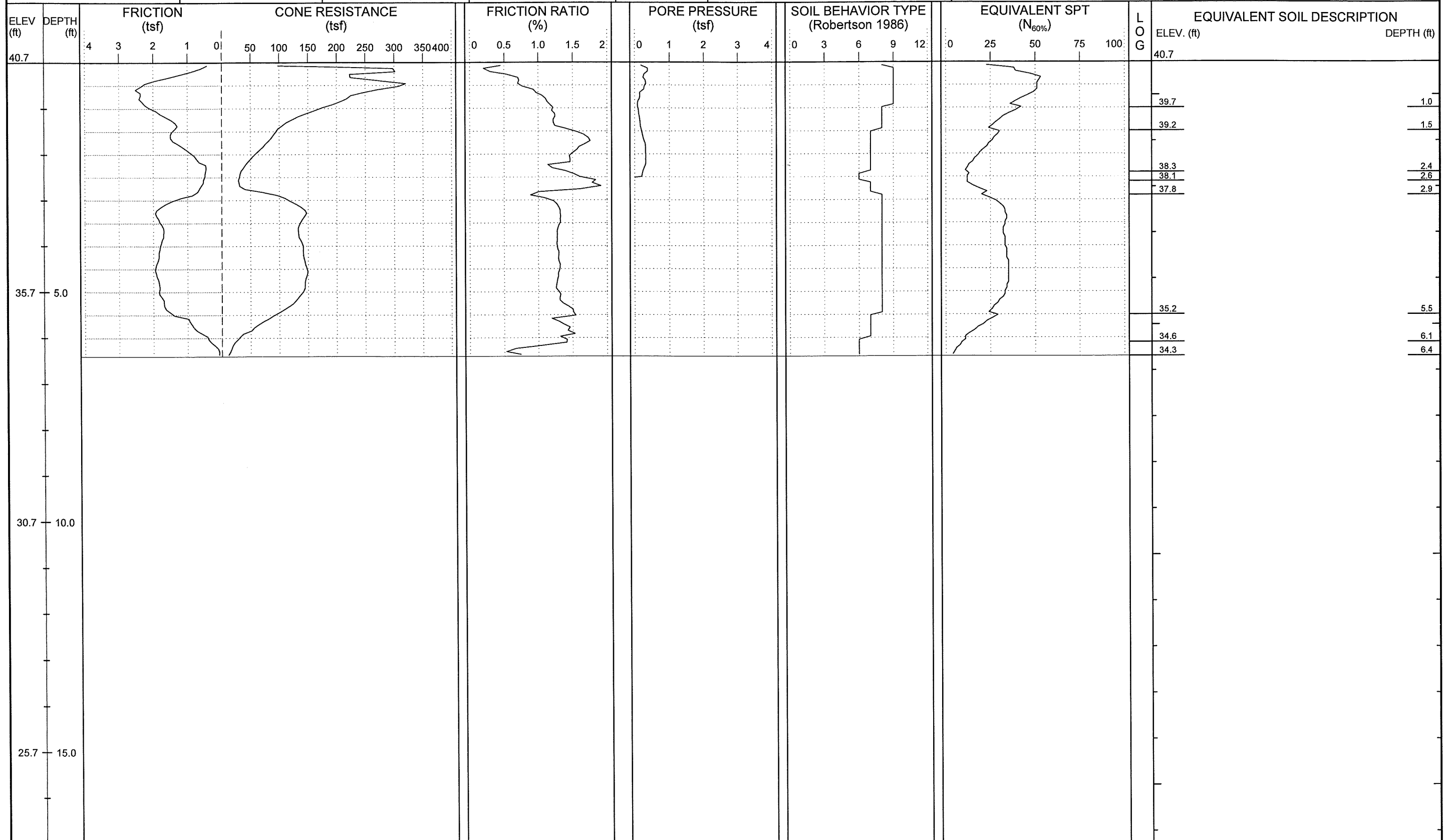




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

SHEET NO.:	48
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

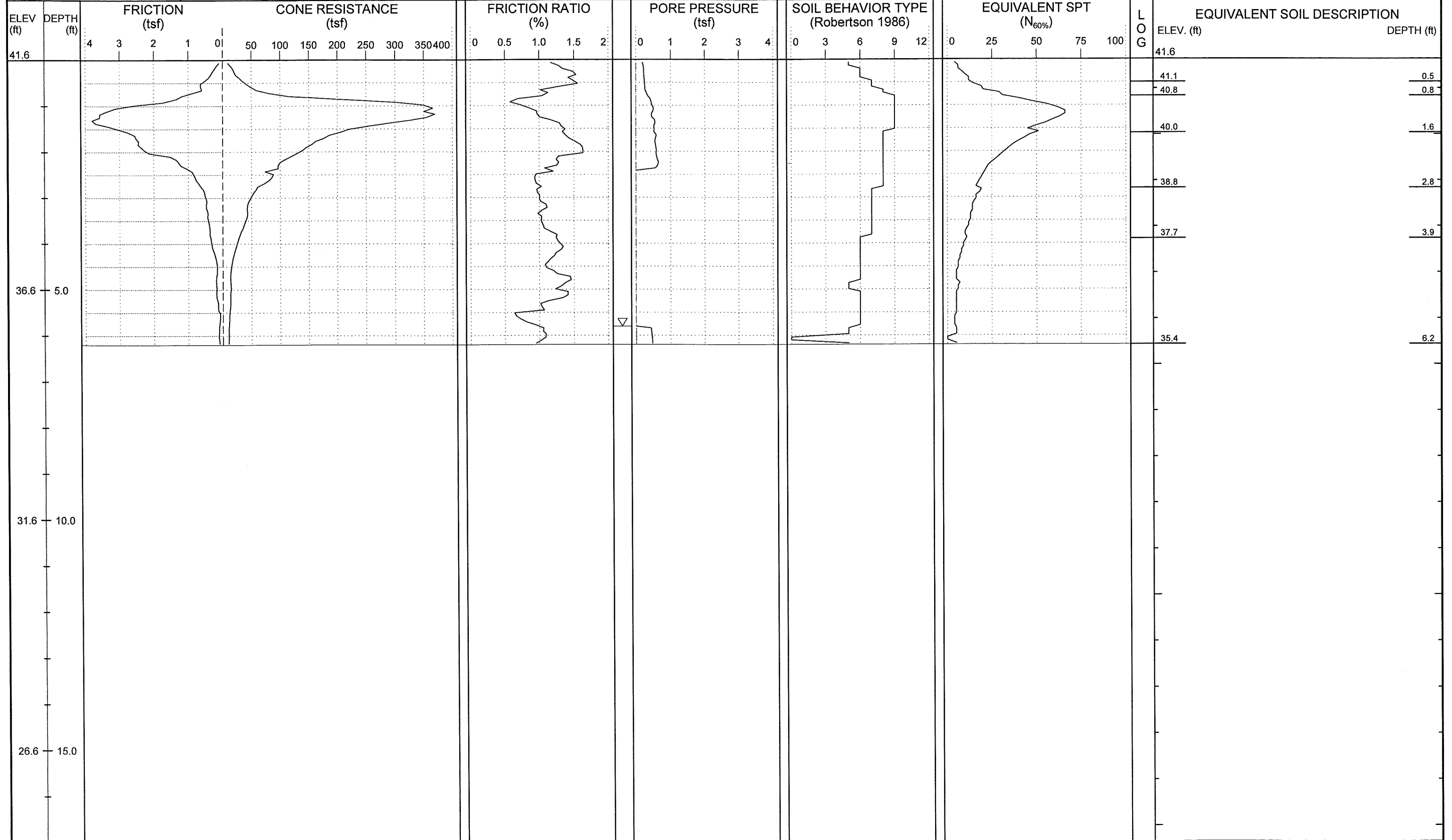
PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y6-24	STATION: 24+00	OFFSET: 50ft RT	ALIGNMENT: -Y6-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 40.7 ft	TOTAL DEPTH: 6.4 ft	NORTHING: 181,214	EASTING: 2,335,790	START DATE: 05/13/09	COMP. DATE: 05/13/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A







PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y6-28	STATION: 28+00	OFFSET: 40ft RT	ALIGNMENT: -Y6-	0 HR. 5.8	ROD TYPE: N/A
COLLAR ELEV.: 41.6 ft	TOTAL DEPTH: 6.2 ft	NORTHING: 181,319	EASTING: 2,336,177	24 HR. N/A	START DATE: 05/13/09
				CONC. DATE: 05/13/09	DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



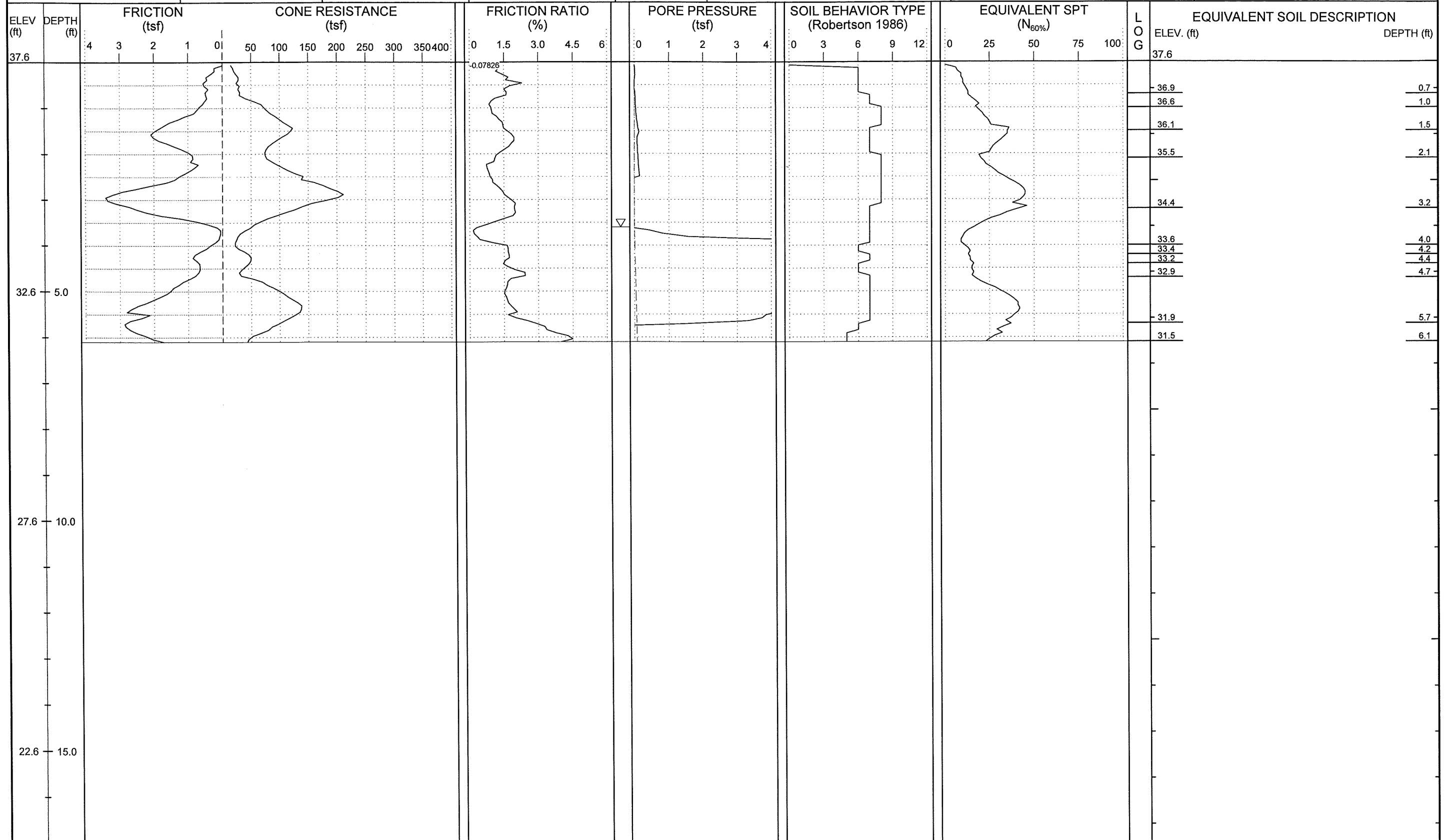


# NCDOT GEOTECHNICAL ENGINEERING UNIT

ENGLISH


SHEET NO.: 51  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 3.6, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y7-13	STATION: 13+00	OFFSET: 20ft RT	ALIGNMENT: -Y7-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 37.6 ft	TOTAL DEPTH: 6.1 ft	NORTHING: 182,221	EASTING: 2,335,387	START DATE: 05/12/09	COMP. DATE: 05/12/09
				DRILLER: Donald Coogan	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	

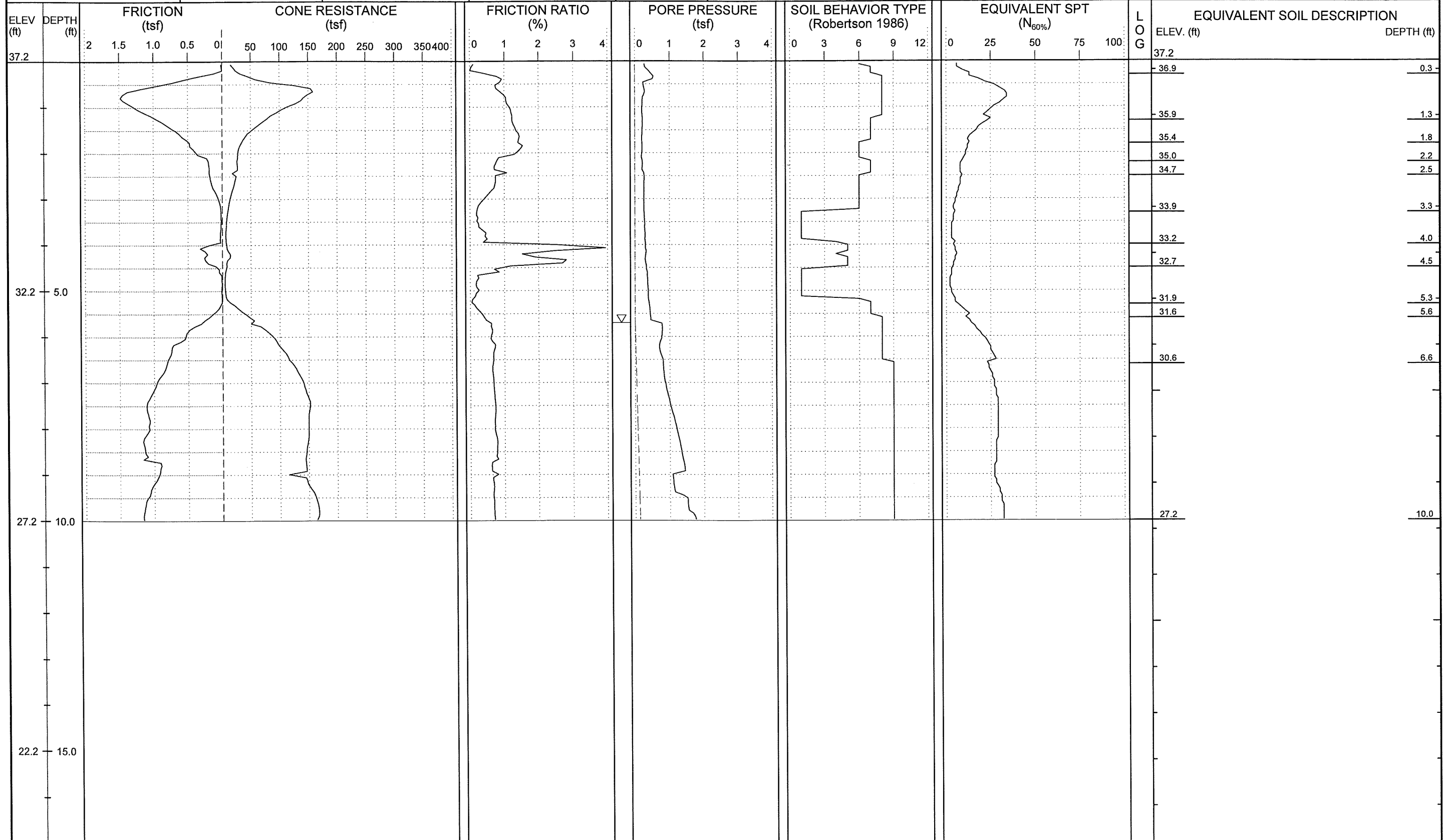




# NCDOT GEOTECHNICAL ENGINEERING UNIT


 SHEET NO.: 52  
 PROJ. NO.: 34932.1.1  
 TIP NO.: U-3338B  
 COUNTY: New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 5.7, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y8-12	STATION: 12+40	OFFSET: 19ft RT	ALIGNMENT: -Y8-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 37.2 ft	TOTAL DEPTH: 10.0 ft	NORTHING: 182,607	EASTING: 2,335,282	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



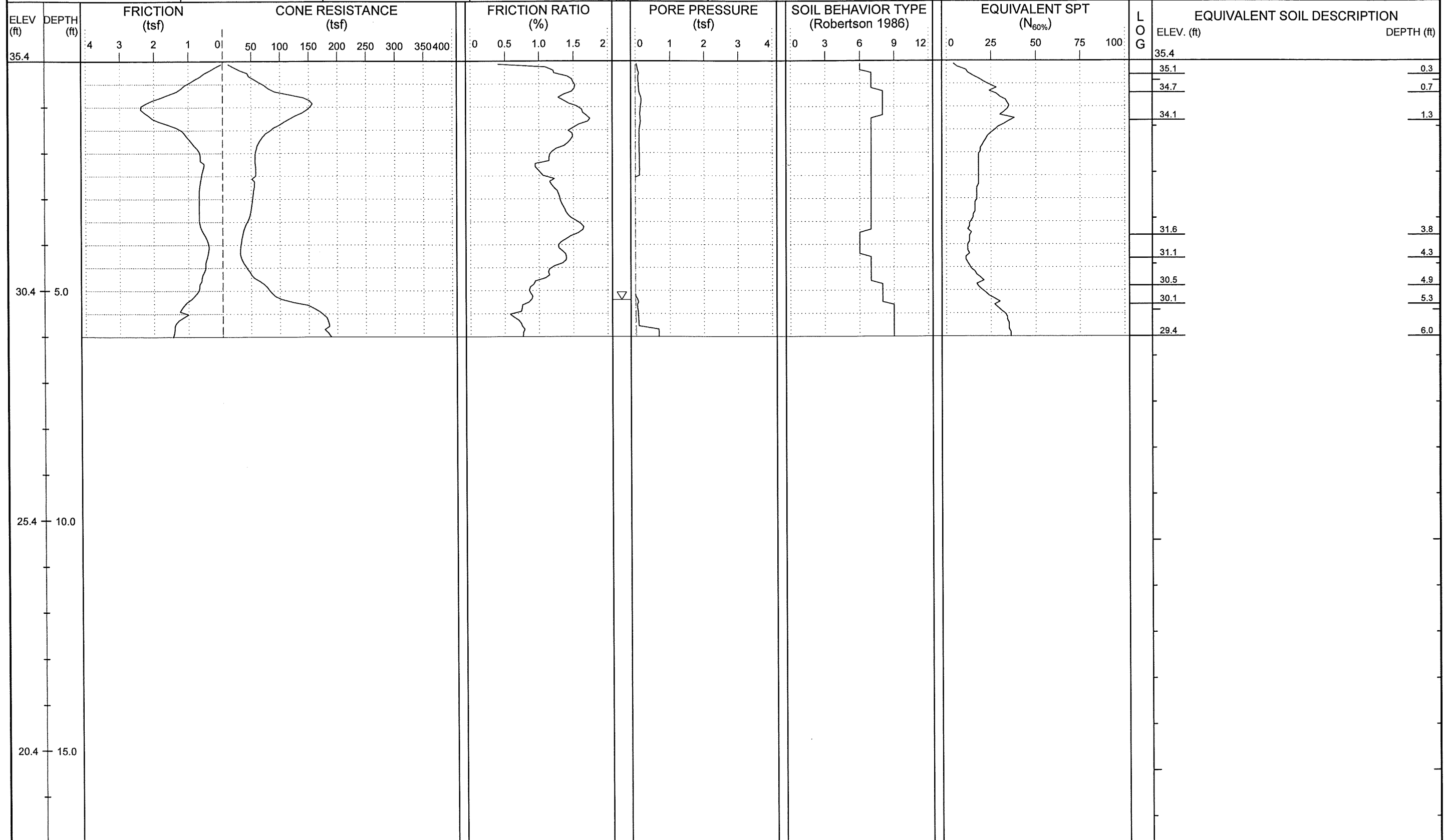


**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH

SHEET NO.:	53
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)			GROUND WTR (ft): 0 HR. 5.2, 24 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezocone
BORING NO.: Y8-14	STATION: 14+07	OFFSET: 33ft LT	ALIGNMENT: -Y8-	ROD TYPE: N/A	CONE ID: DSA0866
COLLAR ELEV.: 35.4 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 182,651	EASTING: 2,335,451	START DATE: 05/12/09	COMP. DATE: 05/12/09
					DRILLER: Donald Coogan
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A







# NCDOT GEOTECHNICAL ENGINEERING UNIT

SHEET NO.:	54
PROJ. NO.:	34932.1.1
TIP NO.:	U-3338B
COUNTY:	New Hanover

PROJECT NO.: 34932.1.1	ID.: U-3338B	COUNTY: New Hanover	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: ~20 Ton
SITE DESCRIPTION: SR 1175 (Kerr Ave) from Randall Pky to SR 2649 (MLK Jr. Pky)				GROUND WTR (ft): 0 HR. 4.8, 24 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y8-16	STATION: 15+88	OFFSET: 23ft LT	ALIGNMENT: -Y8-	ROD TYPE: N/A	CONE TYPE: Piezocone
COLLAR ELEV.: 35.6 ft	TOTAL DEPTH: 6.0 ft	NORTHING: 182,631	EASTING: 2,335,641	START DATE: 05/12/09	CONE ID: DSA0866
				COMP. DATE: 05/12/09	DRILLER: Donald Coogan
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	

